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ABSTRACT

The report of the Eighth Regional Consultation Meeting on the Asian Programme of Educational Innovation for Development (APEID) reviews APEID's activities for 1981-82 and proposed third-cycle program (1982-86), and includes group reports on universalization of primary education, promotion of scientific and technological creativity, and information, communication support and functioning of the APEID network. APEID activities for 1981-82 are listed, including development of distance learning materials for teacher education, and seminars on agricultural education and rural development. The 1982-86 APEID program, including recommended modifications, is outlined, and major educational policy trends in APEID countries are summarized. A group report on universalization of primary education discusses access to education, retention/completion rates, repeaters, dropouts, achievement standards, guidelines for national studies, strategies and activities at regional/national levels, and planned activities for 1983-84. The report on promotion of scientific and technological creativity (with focus on science for all) describes past efforts in science education and issues in development of comprehensive "Science for All" programs, defines "all" and "science," and covers learning needs, delivery systems, personnel training, evaluation, supervision, equipment, and regional cooperation. A third report discusses information development/dissemination within APEID, functions of national development groups (NDG), development of communications support, and APEID's 1983-84 program. Guidelines for NDG's are included.

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Eighth Regional Consultation Meeting on the Asian Programme of Educational Innovation for Development

UNESCO

Bangkok, 22-28 March 1983

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Eighth Regional Consultation Meeting

on

the Asian Programme of Educational Innovation for Development

Bangkok, Thailand, 22–28 March 1983

FINAL REPORT

UNESCO REGIONAL OFFICE FOR EDUCATION IN ASIA AND THE PACIFIC

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Dr. N.N. Singh
Mr. John E. Smith
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INTRODUCTION

Background

1. Since its inception in 1973, the Asian Programme of Educational Innovation for Development (APEID) has provided for regular consultations with the chairmen or senior members of the National Development Groups for Educational Innovation (NDGs) and heads and specialists of the APEID Associated Centres.

2. The Eighth Regional Consultation Meeting was held at the Unesco Regional Office for Education in Asia and the Pacific (ROEAP), Bangkok, from 22 to 28 March 1983. It was attended by participants from 19 countries and observers from international and inter-governmental organizations. (The List of Participants is at Annex III).

3. Apart from reviewing APEID activities in 1981-1982, the Meeting examined the future activities of APEID in light of: (a) Unesco's Second Medium-Term Plan (1984-1989); (b) the recommendations of the Second Session of the Advisory Committee on Regional Co-operation in Education in Asia and the Pacific; and (c) the new trends and developments in education in the region. The Meeting also held in-depth discussions on two major programme areas of APEID, namely: (a) Universalization of education at the primary level; and (b) Promotion of scientific and technological competence and creativity, with focus on science for all. Discussions were also held on the participation in the activities scheduled for 1983 and the draft work plan for 1984 as well as on APEID's information development and dissemination services and institutional mechanism. (The Agenda is at Annex I).

4. Immediately preceding the Consultation Meeting, a Task Force was convened from 18 to 21 March 1983 to consider the agenda and other working documents of the Meeting, as well as to prepare a set of questions which might facilitate the discussions of the Consultation Meeting. (The List of the Task Force Members is at Annex IV).

Inauguration

5. The participants were welcomed by Mr. Raja Roy Singh, Assistant Director-General, Unesco Regional Office for Education in Asia and the Pacific. He highlighted the major outcomes of each of the previous seven Consultation Meetings and indicated that the cumulative experience of the consultation process and the impetus of the unfolding development challenges which the countries of the region are facing provided the foundations of the present consultation.

6. The Meeting was inaugurated by H.E. Dr. Kasem Sirisumpundh, Minister of Education, Government of Thailand. He emphasized the significance of the Meeting in setting new priorities and future directions of APEID. It was gratifying, he said, to see APEID often being cited as a fine model of technical co-operation among developing countries. It would be advisable to jointly consider the effectiveness and impact of the programme participation at the national and regional levels.

7. Mr. Winston R. Prattley, UNDP Regional Representative, in his address, referred to the excellent co-operation between Unesco and UNDP in the UNDP-financed part of the programme. He mentioned that a UNDP/Unesco joint evaluation would be undertaken during April 1983. (Addresses at the inauguration are at Annex II).

Officers of the Meeting

8. The Meeting unanimously elected by acclamation Mr. Suradej Visessurakarn (Thailand) as Chairman, Mrs. Serla Grewal (India), Prof. Shigeo Tajima (Japan), Dr. Yung Dug Lee (Republic of Korea), and Mr. W. Sterling Perera (Sri Lanka) as Vice-Chairmen; Mr. William L. Streat (Australia) and Dr. (Mrs.) Minda C. Sutaria (Philippines) as Rapporteurs.

9. The Meeting unanimously elected by acclamation the following as Group Chairmen:

Group A : (Universalization of Education at the Primary Level) – Dr. N.N. Singh (Nepal)

Group B : (Promotion of Scientific and Technological Competence and Creativity) – Dr. Dolores F. Hernandez (Philippines)

Group C : (Information, Communication Support and Functioning of APEID Network) – Mr. John E. Smith (New Zealand).

10. The following constituted the Drafting Committee: Mr. Zhang Tianen (China), Dr. M.R. Suparman (Indonesia), Mr. A.K. Neuendorf (Papua New Guinea), Dr. Woong Sun Hong (Republic of Korea), and Dr. Pham Minh Hac (Socialist Republic of Viet Nam).

Work of the Meeting

11. The Meeting held five plenary sessions to: (a) review APEID activities in 1981-1982; (b) present the new educational trends and developments in the countries of the region; and (c) review APEID's third-cycle programme.

12. These were followed by meetings in three groups during which in-depth discussions were held on specific topics (indicated earlier).

13. The last two plenary sessions considered the Groups' reports which the Meeting accepted without change and the draft report of the plenary sessions. In the closing session on Monday, 28 March 1983, the Meeting considered and adopted its report.

Part One

REVIEW OF APEID (1981-1982)

1. APEID may be seen as a system which, like any dynamic one, continuously renews itself on the basis of feedback which it derives from within itself and its environment. To ensure its continuous renewal, it has installed built-in mechanisms for deriving such feedback, one of which is the biennial regional consultation meetings in which Member States have occasion to review its performance during the past two years.

2. The review undertaken during the Eighth Regional Consultation Meeting (RCM) straddled two programme cycles, namely, the second programme cycle which ended in 1981 and the third, which began in 1982 and will end in 1986. It was especially designed as a purposive review in the sense that it was intended to provide bases for making adjustments or modifications, if necessary, in the programme for 1983 and for finalizing the programme for 1984.

3. For the purpose of renewing and planning programmes, the review focused on growth points and gaps or shortfalls for determining the thrusts of future action. The review that follows is based on the evaluative review made by participants during the RCM.

Expansion of APEID

4. By 1981 the number of Associated Centres had increased to 100, 46 of which had been associated during 1981 and the previous three years.

5. Of the 21 countries that had joined APEID by 1981, three countries, namely, China, Maldives and New Zealand were formally admitted only one year earlier, i.e. in 1980, and another, Papua New Guinea, in 1978. Two countries, namely, Lao People's Democratic Republic and Viet Nam, which had much earlier taken an active part but later suspended participation, resumed participation during this period. During the second-cycle period, from 1979 onwards, the participation of Iran, although not suspended, had considerably declined. There is, however, an indication from the Eighth RCM participant's statement that its participation in the third-cycle programme will be accelerated.

6. Of the 21 countries which had joined APEID by 1981, six had either joined or resumed participation within the previous four years.

Growth points and development of APEID by 1981

7. In order to assess the performance of APEID objectively, it will be useful to make comparisons on the extent of participation of member countries as indicated

in the table below. The figures indicate a significant increase in participation in APEID activities.

Participation in APEID during 1974 and 1981

Year	No. of participants in regional activities	No. of participants in national activities	No. of publications
1974	46	Nil	6
1981	432	715	26

8. The effectiveness of participation, measured in terms of the number of Associated Centres in a country and the number of countries *effectively participating*[1] is projected in the following table.

Growth in the effectiveness of participation

Year	No. of Associated Centres	Countries participating effectively
1974	12	8
1981	100	21[2]

9. Some important clusters of activities were concluded in 1981. These are significant since they represented the outcome of several series of multi-phase activities and of continued and intensive involvement of groups of countries over a number of years producing visible changes in the structures and orientation of the efforts in the countries concerned. The outcomes of these clusters of activities provided bases for elements of the programme of the third cycle. The review of APEID is presented by the clusters in the following paragraphs.

Co-operative research and development

10. Four joint innovative projects were completed during the second cycle, namely, (a) Meeting the Educational Needs of Young People without Schooling; (b) Integrating Subject Areas in the Primary Education Curriculum; (c) In-service Primary Teacher Education; and (d) Moral Education. The first three projects were implemented with funding support from the UNDP. The fourth was funded by the Government of Japan, and the activities were organized by the National Institute for Educational Research (NIER) in close co-ordination with ACEID.

1. The criterion is that the country should have at least one centre associated.

2. All the 21 countries which had joined the Programme by 1981. Turkey joined APEID as the 22nd country in 1982, and has yet to associate a centre.

Development of distance learning materials for teacher education

11. Two meetings were devoted to this theme, one dealing with pre-service and in-service teacher education, and the other with training of science teachers. A three-volume study on one of these activities has been published, and the outputs of the other are being readied for publication.

Technical and vocational education

12. A technical working group prepared a synthesis of existing innovative practices and made recommendations on innovations in curriculum, instructional materials and physical facilities for education in business and commercial subjects. NIER, Japan, organized the first regional workshop on the preparation of teachers for vocational and technical subjects, which was followed by a second workshop on teacher preparation in 1982. A second volume of inventories of innovations in this area was published in 1981.

Low-cost instructional materials

13. A series of workshops was held during the second cycle on the development of low-cost instructional materials. In several countries, national workshops were organized to extend the involvement in this exercise, and ultimately make its impact felt at the grassroots level.

14. The report on the second sub-regional workshop was published in 1981. The activity which was initiated in 1977 and followed up with a sub-regional workshop in 1978 led to the development of an inventory of low-cost instructional materials. The first volume containing instructional sheets on 85 materials was issued in 1980, and the second volume consisting of 52 materials in 1982. A synthesis study was also prepared and published.

Other important activities

15. a) **Science education.** The activities in this area included workshops for up-dating the curriculum and improving the standards of instruction in mathematics and biology, a mobile team facility under the Japanese funds-in-trust arrangement which enabled one country to train a nucleus of staff in science and share experience and expertise with other APEID countries, and a study group meeting which reviewed the situation and made recommendations on science curriculum and instructional materials development. The meeting considered the programme areas of education for the promotion of scientific and technological competence and creativity as recommended for the third programme cycle.

b) **Educational broadcasts.** A seminar was organized by the Japan Council of Educational Technology Centres and the Japanese National Commission for Unesco in the context of APEID for educational technology. Study visits were organized for educators of two countries to India, Malaysia and Thailand for sharing experiences and materials in educational broadcasting. A sub-regional training course was organized in educational broadcasting in co-operation with the Asia-Pacific Institute for Broadcasting Development.

c) **Education and rural development.** Two seminars were held, one organized by Tsukuba University on agricultural education and the other by Obihiro University on education for rural development.

In 1981 scholars and institutions of six countries were asked to synthesize researches and review the state of the art. Experimental and development researches were also commissioned to scholars for developing suitable training programmes. An Associated Centre compiled a profile bibliography on the role of education in integrated rural development.

Two important works were produced:

- Five volumes of experiences in education and rural development which are among APEID's most popular publications;
- Report on the regional seminar on rural development planning.

d) **Training of educational personnel.** An activity was organized in 1981 which provided opportunities for educational supervisors and those responsible for their training or guidance to implement innovative practices and projects in two countries. A technical working group meeting was convened on the preparation of key personnel in administrative and supervisory positions focusing on supporting innovations in education. Four national studies on new profiles of educational personnel were published.

e) **Significant events.** Besides the above important activities, there were other significant events and activities. The most significant one was the holding of the Seventh Regional Consultation Meeting and evaluation of the past performance of APEID in terms of the participation of the countries from 1978 to 1981. The evaluation exercise involved Associated Centres and National Development Groups. The report of the Seventh Regional Consultation Meeting and the accompanying work plan reflected the outcomes of the evaluation which was done in the light not only of past performance but also of proposals for the development of the third cycle of APEID in accordance with what the countries expected to be involved in and what they perceived would produce the most benefits for them through inter-country exchanges and co-operative exchanges.

In 1981 the following occasional papers were published: (i) Development of Professional Support Services in Innovations; (ii) Experimental and Developmental Research including Evaluation; and (iii) Enhancing the Relevance and Contribution of Education to the Development Sectors. These were prepared by some educational pioneers in the region.

APEID in 1982

16. The year 1982 marked the beginning of the third programme cycle. As was earlier indicated, the organization of work for the third cycle is different from that of the second cycle. In the third cycle, there are eight programme areas, five of which are for relating innovations in all aspects of education to specific development goals, and three which seek to strengthen the structures and processes within educational systems for making effective and rapid response to changing needs for development.

17. A total of 29 regional activities were organized in 1982 in contrast with the 25 that were organized in 1981. All APEID member countries except Iran took part in some of these activities. In 1981, 26 workshops were organized in ten countries, while in 1982 only ten workshops were held in the same number of countries. This should not be interpreted as a reduction of participation of member countries, for there were other activities carried out at the national level, such as surveying the present situation, certain concerns and existing innovative projects and future plans of the countries in regard to each programme area of the third cycle. This exercise was necessary as a basis for reflections on inter-country co-operation in building national capacities for facilitating the attainment of national development goals. The activities prepared in the APEID work plan for the third cycle were reviewed and suggestions were proposed on their scope and content.

18. Some of these activities were sponsored under a sister project calculated to improve education in basic sciences with a view to facilitating the entrance of students to technical and vocational institutions. The least developed countries (LDCs) of the region benefited from the project.

19. The significant events, innovations and accomplishments during 1982 may be summarized as follows:

a) The creation of research base and multidisciplinary and inter-agency reflections on performance of innovations and directions for further development were the major characteristics of the activities particularly in the areas of universalization of primary education and of education and rural development. The concern for the disadvantaged groups emerged as a key element of the new strategies for universalization of education at the primary level.

b) In the area of education for promotion of scientific and technological competence and creativity, 'science for all' was the keynote of the new activities, while concerted action for raising the level of science education in the secondary schools continued.

c) Distance education which had emerged as an important area of work towards the end of the second cycle received increased consideration as a means of building up the necessary infrastructure and local resource centres. Preparations were also made for a similar approach for textbooks and other printed materials through activities which would be initiated during 1983.

d) 'Futures and education' is another area in which some pioneering work was initiated.

e) Vocationalization of secondary education was one of the two elements strongly emphasized in the work plan of the third cycle.

The development of work experience and pre-vocational courses at both the primary and secondary levels with emphasis on the overall development of personality without ignoring orientation to skills, came out very strongly in some of APEID's activities organized during 1982.

f) Considerable upsurge of interest has been noticed in all countries in expanding and intensifying their involvement in APEID. Turkey joined APEID as the 22nd member country in 1982. Fourteen new centres were associated during 1982; more centres are currently in the process of association.

g) Some of the publications of APEID, e.g., a series on education for rural development, on distance education, on development of modular instructional materials related to core curriculum in rural development, and several occasional papers have been stimulating special interest. The facility of exchange of resource persons has at a very small cost proved to be extremely valuable in terms of the building of national capacities within the region.

Highlights of activities in 1982

20. **Universalization of primary education (UPE).** A regional workshop was held and its outcomes include: (a) development of indicators for evaluating the status of universalization of primary education in a country; (b) a synthesis of reviews of researches and evaluative studies on the subject; (c) a summary of the experiences of innovative projects in respect of significant educational dimensions such as curriculum and instruction, management and financing; and (d) suggestions for national studies and workshops and special research studies for reviewing the existing plans for UPE.

It was realized that several activities in the programme area "education and rural development" equally belong to UPE, since the rural population is one of the largest disadvantaged groups whose needs require special attention under the programme area UPE.

21. Publications produced in 1982 that are germane to UPE are the following:

i) National studies India by L.R.N. Srivastava, Philippines by Juanita S. Guerrero, Republic of Korea by Ki Hyong Oh, and Sri Lanka by S.B. Ekanayake on multiple class teaching and the education of disadvantaged groups.

ii) An overview of non-formal education in Asia and the Pacific by C. Duke and K. Vorapipatana.

iii) A paper on language development and intellectual functioning by K. Collis.

iv) Reports of finalization meetings of three joint innovative projects.

22. In 1982 a special issue of the Inventory of Educational Innovations in Asia and the Pacific containing 16 projects of six countries on health and nutrition education was published. An Associated Centre was commissioned to undertake a synthesis of researches and innovative work in the field of health and nutrition education at the primary school level. Workshops in the area were held in two countries, and eight more were planned to be held in 1983.

23. Documentation was assembled in ACEID for use in the preliminary studies on raising the level of achievement of children and the innovative capacity of schools.

24. **Education for the promotion of scientific and technological competence and creativity.** Activities in this programme area can be grouped into five categories as follows:

a) *Science for all.* In the light of a recommendation of CASTASIA II, a planning group meeting was convened to develop a plan for the regional meeting on 'Science for All'.

b) *Development of science teaching in individual subjects.* A number of meetings and workshops were organized, namely:

i) Sub-regional Writing Workshop in Physics Education Focused on Experiments of Investigatory Nature.

ii) Regional Design Workshop on Chemistry Curriculum and Teaching.

iii) National Training Workshop on Biology Education in two countries.

c) *Development of integrated science courses relevant to education in vocational and technical subjects.*

d) *Mobile teams under Japanese funds-in-trust arrangement.*

e) *Out-of-school scientific activities for young people.*

25. **Education and work.** This programme area has two sub-programmes, namely vocationalization of secondary education and technical and vocational education. In this connection, a planning panel on work experience in general education was convened. It identified major issues in the area and made suggestions for undertaking national studies on education and work and the preparation of in-depth studies of innovative projects and identification of resource persons and educational research.

26. In the sub-programme of technical and vocational education, a mobile seminar for technical teacher educators was fielded.

27. **Education and rural development.** The activities may be categorized under training, research and development and delivery systems. Some activities under other programme areas would also contribute to rural development. A study of the educational component of Saemaul Undong (Republic of Korea) was the theme of one seminar on education for rural development held in 1982. Research studies related to educational innovations for rural development have been made in a number of countries as well as studies in health and nutrition education. A profile bibliography on the role of education in integrated rural development is being readied for publication.

28. Another important activity in 1982 was the national evaluative workshop on "general education in a rural environment." Evaluative studies were undertaken on the APEID Udornthani (Thailand) experimental project on curriculum development for rural transformation and a 15-minute colour film was produced depicting the key innovative features of the project.

29. The study group meeting convened jointly by APEID and INNOTECH in the Philippines in January 1982 examined alternative delivery systems for the rural

poor with focus on science and technology. The Meeting developed guidelines for the use of delivery systems with print and non-print media for giving new technology to the tradition-oriented rural people in a manner acceptable to them.

30. **Educational technology with stress on mass media and low-cost instructional materials.** The activities under this area broadly covered three sub-programmes.

a) Review and planning activities;
b) Development of guidelines on different types of educational materials; and
c) Activities related to meeting specific needs of countries.

The following publications issued from these activities:

a) An overview of development of low-cost instructional materials.
b) A three-volume study of distance learning materials.
c) Second volume of the inventory of low-cost instructional materials.

31. **Professional support services and training of educational personnel.** The activities undertaken in 1982 are of three types:

a) Planning of training programmes in the light of foreseen social and technological change;
b) Training of educational personnel for implementing innovative projects, content and methods;
c) Providing support in the form of resource persons and materials for training courses.

32. **Co-operative studies, reflections and research related to future development and orientations.** The activities organized in 1982 under this programme area focused on two subjects, namely, 'education and futures' and development of 'research concerning implementation and evaluation'. Nine countries are involved in the interdisciplinary study on education in the context of alternative futures.

33. A regional workshop was organized by NIER, (Japan) in co-operation with ACEID on development of research relating to implementation and evaluation of reforms of educational content and methods. One of the significant features of this workshop was a visit to a pilot project in connection with the Ministry of Education's programmes of periodic curriculum reforms.

34. An APEID supplementary programme area deals with publications, internships training in documentation, special consultations and orientation of heads of new Associated Centres. In 1982 the following activities were carried out: (a) an orientation programme for the heads of new Associated Centres was held. The participants identified the activities in APEID for the participation of their centres; (b) representatives of NDCs and Associated Centres from two LDCs were invited for consultation on strengthening the participation of these countries in APEID; and (c) a training programme in documentation services was organized at Unesco Regional Office for Education, with the co-operation of the Library and Documentation Unit of this Office. The staff members from four Associated Centres benefited from it.

35. The Meeting having reviewed the performance of APEID in 1981-1982 expressed gratification at the extent and intensity of participation of the countries in various APEID activities at the regional and national levels. The participants placed on record their appreciation of the opportunities provided their centres and expressed their eagerness to continue to participate in APEID through the third-cycle programme.

36. The growth points and developments that were brought to the fore during the review of the performance of APEID in 1981-1982 have led them to view APEID as a forum for mutually beneficial exchange of experiences, a useful mechanism for identifying problems and discovering satisfactory solutions to them, and an instrument for developing national capabilities in evolving and implementing innovations for development. In view of this, they have committed their countries to the third cycle programme and to strengthening the NDGs and improving the modalities of action of the programme.

Gaps and shortfalls: some suggestions

37. The Meeting agreed that the modalities of action employed in APEID have been effective and useful. Among the modalities adopted, the participants considered attachments, internships, mobile training workshops and inter-country study visits the most edifying and satisfying modes of developing the capabilities of personnel intended to form a cadre of well-trained personnel in their countries. They were considered the most potent mechanisms for developing not only specific knowledge and skills but also for fostering regional co-operation and international understanding. Their merit lies in the copious opportunities they provide the participants for mutual exchange of information, experience and expertise in informal situations and for learning through experiencing.

38. Suggestions were made by the Meeting on further improving the internship programme which is regarded as one of the most effective modalities. Among others, these included: more information to be provided to the host countries on the interns like food habits, religious traditions and special interests; long-term planning of the attachments/internships so that they can be fitted into the schedule of activities of host institutions; and provision of detailed information to the participants about the host institution and the country of attachment. It was also recommended that the countries should be encouraged to promote intra-country attachments from their own resources. Whereas APEID cannot be expected to provide financial support for intra-country attachments, it may extend professional support, on request.

39. APEID aims to develop national capabilities for formulating and implementing various innovative educational programmes. To achieve this objective, appropriate modalities are being adopted. Some participants urged that it may be desirable to modify the emphasis of APEID with a view to developing institutional capabilities of the Member States, especially in the LDCs where there is need for lead institutions to accelerate the process of developing innovative capabilities in the educational system. From this point of view, it has been suggested that APEID lay more emphasis on programming long-term attachments of personnel, mobile training workshops, provision of training fellowship and secondment of experts. This approach will help the member countries, especially the LDCs, to develop cadres of trained personnel.

40. The participants perceived the numerous benefits that can be reaped from multi-national consultations and multi-national formulation and implementation of programmes. However, in spite of the broad similarities that exist among the member countries of the region, these are bound to unique requirements of groups of countries which may not fit into an integrated pattern. It would seem necessary for APEID to consider the peculiar needs of some member countries. From this vantage point, APEID may wish to set up relevant forums for a limited number of countries where matters of common concern to such countries are taken up.

41. It was suggested that the Associated Centres and the NDGs initiate activities calculated to improve the process of determining who should participate in specific activities. There was agreement that greater benefits can be derived from the participation of a country if the participant's background, training, and work are relevant to the objectives and nature of the activity, and if he is provided opportunities for multiplying the effects of his participation upon his return to his station.

Facilitating and inhibiting factors in implementing the APEID programme

42. The review of the performance of APEID in 1981-1982 identified some facilitating and inhibiting factors in implementing the programme. Some factors turned out to be both facilitative and inhibitive depending on the level at which they were developed, or their intensity. A good example is the communication system. Where the communication system between the NDG, the Associated Centres, the different sub-systems of the education system and the Ministries that provide social services is well developed, that is, there is a communication network with channels of communication open in all directions, the implementation of APEID activities which requires inputs from different sectors is invariably effective.

On the other hand, where there is no clear communication network, and channels of communication are clogged, there is difficulty in getting action initiated because sectors that need to be involved cannot be adequately oriented to the role they are expected to play in specific activities/projects. It is evident that where efforts are exerted to develop a communication system to serve the purposes of APEID, successful implementation of projects/activities may be envisaged.

43. There was agreement that the NDGs and Associated Centres can contribute much to the development of an effective communication system for APEID, not only at the national and sub-regional levels, but at the regional level as well. Several countries expressed a desire to do so.

44. It has been suggested that leadership in the NDGs and Associated Centres is a facilitating factor in APEID. Where the heads of the NDG and the Associated Centres manifest strong leadership, there is greater cohesiveness within the NDG and among the sectors which these bodies collaborate with, and consequently, more effective implementation of projects/activities and better quality participation in regional and national undertakings within the ambit of APEID.

45. Another major facilitating factor is congruence between APEID programme areas and projects/activities and the major policy thrusts and developments in the

countries. Regional activities/projects fit into the national programme, and the results of such efforts are maximized. A good example cited by one country is the regional activities on low-cost instructional materials and equipment which were so easily integrated into the mainstream of the national activities because they were very responsive to the specific country's needs and thrusts.

46. Several countries referred to language as an inhibiting factor. Some have much experience to share but they do not have adequate resources for translating their materials into English. Some of the participants suggested that language has worked against their maximizing benefits or learnings from forums and other activities in which only English is used as the medium of communication.

47. The identification of facilitating and inhibiting factors is useful in that APEID may be provided the basis for developing supplementary programme areas addressed to maximizing the facilitating factors and diminishing the effects of the inhibiting factors.

Areas of special interest

48. In the course of the review the following areas of special interest were identified:

a) Planning and management of education and support facilities of the education system to serve the aims of 'education for all';

b) Pre-school and early childhood education with emphasis on indigenous approaches and the involvement of parents and the community;

c) Girls' and women's education;

d) Education of exceptional children: the handicapped, and other disadvantaged groups as well as the gifted;

e) Community education;

f) Integrated science curriculum for primary education;

g) Improvement of achievement levels, evaluation of learning, monitoring progress in improving achievement;

h) Adoption/adaptation of new communication and data processing technologies, training in utilization and evaluation of their potential for improving achievement levels;

i) Moral education;

j) Improvement of small schools and integration of institutions operating outside the school system;

k) Non-formal and informal education, particularly distance learning systems;

l) Making the results of research available to teachers, school administrators and policy and decision-makers;

m) Enhancing the influence of research in policy and decision-making.

49. The Meeting felt that the above special interest areas might be reflected in the third-cycle APEID programme for 1983 and 1984, except those areas which are already involved in the regional programmes other than APEID.

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Part Two

REVIEW OF APEID'S THIRD-CYCLE PROGRAMME

1. The Meeting undertook a review of APEID's third-cycle programme (1982-1986) with a view to proposing adjustments and modifications in the light of:

a) The emphases and concerns of Unesco's Second Medium-Term Plan (1984-1989);

b) The priorities and emphases recommended by the Second Session of the Advisory Committee on Regional Co-operation in Education in Asia and the Pacific (August 1982);

c) The outcome of the review of APEID's activities 1981-1982 including the background of APEID's second cycle, presented in Part One of this report; and

d) The new trends and developments in the participating Member States.

2. In relation to 1983, the participants were asked to review the activities proposed for that year and explore the interest of the countries in participating in and hosting activities.

3. In respect of 1984, the participants were invited to examine the outline programme and make suggestions for its modification as well as indicate interest in participating in activities.

Review of APEID 1982-1986

4. The Meeting noted that unlike the second cycle when programme activities were organized by *aspects of education*, the work plan of the third cycle had been based largely on development themes or areas. Of the eight programme areas listed, five involved relating innovations in all aspects of education to specific development goals, and three sought to strengthen the structures and processes within the educational systems for making effective and speedy responses to changing national needs for development. These areas, together with their scope, are described briefly below:

Development-related programme areas:

a) *Universalization of education; access to education at the first level by both formal and non-formal means,* with emphasis on the disadvantaged groups and the compulsory study of moral values, health and nutrition and support of innovative programmes.

b) *Education for promotion of scientific and technological competence and creativity,* with emphasis on open competence,[1] fostering of creativity, and science for all.

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1. Refers to empowering concepts and skills which are flexible and applicable to a wide variety of situations rather than a limited scope.

c) *Education and work*, with emphasis on work experiences and vocational education as a part of general secondary education; and formal and non-formal technical and vocational courses.

d) *Education and rural development*; promoting participation of educational institutions and personnel in rural development, and strengthening links between formal and non-formal education.

e) *Education and urban development*; the awareness of problems of rapidly expanding organizations, and the training of youth and adults.

Infrastructure development programme areas:

f) *Educational technology with stress on mass media and low-cost instructional materials;* a stress on infrastructure development, improving learning methods and materials including textbooks, teaching aids, and distance learning materials.

g) *Professional support services and training of educational personnel*; the infrastructure for human resources development, in view of changing roles of educational personnel in the development context and mobilization for innovations in education.

h) *Co-operative studies, reflections and research related to educational development and future orientations*; future scenarios and educational structure and content; inter-relation between education, culture and development; research and reflection; information and computer application.

It is envisaged that in respect of the five development-related programme areas, an integrated approach to innovations will be followed.

Unesco's Second Medium-Term Plan 1984-1989

5. The Meeting addressed itself to the question of how the orientation of APEID's third cycle was to be modified for 1984 onwards to reflect the directions indicated in the Second Medium-Term Plan. In this respect, the participants focused their attention on three major areas referred to in the Plan, namely:

a) Education for all;
b) The formulation and application of education policies; and
c) Education, training and society.

6. The participants noted that many areas identified by the Plan were already incorporated actively in APEID's third cycle, and that a significant harmony existed between APEID's activities and the Plan. Two conceptual points were given emphasis by the Meeting: first, the link between quality and quantity in educational arrangements and reform and, second, in relation to equality of opportunity, the concept of 'best opportunities to each.'[1] The Meeting drew attention to some of the emphases that need to be highlighted in APEID activities.

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1. "The democratization of education is not indeed simply a matter of quantity. Improvement in the quality of education is essential for it to be fully meaningful. The aim must be to ensure 'equal opportunity for all' by giving the 'best opportunities to each' [Second Medium-Term Plan, 1984-1989, Unesco, 4XC/4 Approved] ".

a) The planning and management of education and support facilities of education systems directed to the renewal and development of primary education, to serving the aims of education for all, and to the promotion of general access to education and the eradication of illiteracy.

b) The promotion of general access to education, particularly for special populations such as girls and women, the handicapped and disadvantaged groups.

c) The promotion of early childhood education including the encouragement of the involvement of the community.

d) Introduction of basic courses on the problems of the education of children in the formal and non-formal education programmes for girls and women.

e) The adaptation to education of the new communication and data processing technologies, training in the skills required for their utilization and evaluation of their impact and potential.

f) The promotion and strengthening of moral education.

Report of the Advisory Committee on Regional Co-operation in Education in Asia and the Pacific (August 1982), and other suggestions

7. The participants considered the observations and recommendations of the Advisory Committee, changes proposed by design meetings held within APEID's context and suggestions received from the countries. The view of the Advisory Committee was noted that all eight programme areas should be retained because no programme area could be deleted without seriously impairing the integrity of the programme to serve the needs of the region as a whole. It was noted further that the Advisory Committee, identified universalization of education at the primary level as meriting the highest priority and support under APEID.

8. The Advisory Committee also:

a) recommended that a concerted effort be made to assist the LDCs in universalizing education and in relating education to the world of work; and that resources should be provided for the benefit of the LDCs including small island developing countries, under APEID, through more attachments/internships and visits by mobile teams. It was also recommended that the LDCs should act as hosts to more regional activities;

b) underlined the need for giving more attention to the role of Associated Centres particularly through special support for institutional mechanisms in the countries and the programmes of attachments, internships and mobile training teams. It was also recommended that non-government institutions should be involved in APEID's work as Associated Centres;

c) proposed that the links between NDGs and Associated Centres and between APEID and the NDGs should be made more effective, and that APEID should associate more institutions from sectors other than education;

d) recommended that in view of the rapid expansion of the Programme and the network, ACEID as the co-ordinating mechanism should be further strengthened;

e) observed that all forms of evaluation in relation to APEID should be conducted so as to build the self-developmental capacities of the participating countries and institutions.

9. Recommendations relating to programme areas:

a) In relation to *universalization of primary education*, the Advisory Committee recommended that special attention be given to the problem of drop-outs, the need for linking primary education with adult literacy and reducing costs by various means including the use of new technologies. It was also emphasized that the structural base should be strengthened and that research including the utilization of research findings should be increased in relation to education of disadvantaged groups.

b) *Education and work.* It was recommended that comparative regional studies may be undertaken in respect of the value of work experience and vocational experience as an element of general education. It was felt that this had not so far received sufficient attention by systematic study of the experiences of the different countries. Regarding vocational and technical education, it was recommended that the facilities of educational institutions should also be used for providing relevant courses to adults and that this can be handled most effectively in co-operation with professional groups from sectors other than education.

c) *Educational technology with stress on mass media and low-cost instructional materials.* This programme was regarded as indispensable for achieving universalization of education and should therefore be given high priority. The training of personnel needs to be strengthened.

d) *Professional support services and training of educational personnel.* In implementing this programme, particularly its research component, maximum use should be made of organizations and institutions in the region.

e) *Co-operative studies, reflections and research related to educational development and future orientations.* It was recommended that action research focusing on particular problems should receive special attention, and that Project 4 involving promotion of information services and computer applications should be expanded. It was also recommended that more resources should be devoted to the dissemination of information and facilitating exchanges of personnel and materials.

10. *Education for promotion of scientific and technological competence and creativity.* The Advisory Committee supported the study group (1981) which recommended, *inter alia,* co-operative actions and exchanges between school and out-of-school activities, further development of complete learning exchanges on non-traditional elements of the curriculum, giving priority to studies and researches in various aspects of school science education, evaluation techniques to assess pupils' performance, and ensuring that activities have an essential training element.

11. *Inter-programme and professional support.* Experience has shown that two elements in development support communication required further emphasis; namely: infrastructure support and training in the field of development communication, and the mechanism for summarizing and presenting country experiences.

Major educational policy trends and developments in the countries

12. In reviewing the third cycle of APEID, the Meeting gave special attention to the presentation by participants of major educational policy trends and developments in the countries. In considering these policy trends and developments and reflecting on country-wise participation, the Meeting sought to identify those factors which might facilitate or impede the implementation of the third-cycle programme and its impact.

13. Of particular concern to most countries was the universalization of education at the primary level with emphasis upon literacy for all. Several countries reported that although education had been universalized, even beyond the primary level, many problems still remained including the provision of appropriate forms of education for special populations such as women and girls, the disabled and the gifted, and in humanizing educational practices. Therefore, to assist in conceptualizing and analysing the problems, the following elements were noted: (a) access to schooling and out-reach to those out of school; (b) retention of pupils in school including the pacing of learning so that full completion could be achieved; and (c) the quality of pupil achievement, personal development and its monitoring.

14. In reviewing policy trends and developments in the countries, the participants referred to the disadvantaged pupils and out-of-school youth, and emphasized the need for both APEID and their respective country institutions to continue to develop strategies to ensure that effective and adequate opportunities for access to primary education and the acquisition of productive skills were provided. In this context, emphasis should now be placed upon the production of no-cost learning materials and the preparation of studies on dropouts and approaches for lowering dropout rates. Moreover, in relation to the whole school-age population sector, the participants stressed the need to adopt multidisciplinary approaches, the development of programmes in co-ordination with other sectors, new forms of pedagogy and innovative organizational arrangements to ensure that the educational provision was sufficiently differentiated to be in harmony with the needs of the special populations and cultural requirements. For many countries of the region, such sensitive approaches to particular needs are being pursued and are reflected in the examples of country-wise activities presented in Part One. It was felt that the third cycle of APEID should be reviewed and re-appraised and activities identified consistent with this philosophy.

15. There was general agreement amongst the participants of the need for specific programmes in pre-school and early childhood education providing support for efforts towards universalization of education. In one country, an integrated child development services programme makes available in specific communities a package of services—health care, nutrition, pre-school education and functional literacy for

mothers. It has been shown that this approach strengthens motivation for schooling, enhances the nutritional status of children and helps prevent premature drop-out from education.

16. The importance of girls' education was specially stressed. In some countries there existed quite deep social and cultural impediments to girls education and the participation of women in educational management. It was stressed that literacy of females was not only important for ensuring early realization of the goal of universal education, but it also contributed to such important objectives as family planning and the improvement of the quality of life.

17. A good deal of stress was also placed upon access to education for the disabled and the severely handicapped. Several countries in the region are actively pursuing programmes to integrate disabled children into the normal school setting. Emphasis here had to be placed upon the training of teachers to cope with the special requirements of disabled children in classes and, where possible, to the modification of school facilities to cope with their needs.

18. In one country, the universalization of primary education is being promoted through incentives such as the provision of free textbooks and school uniforms, the recruitment of more female teachers, strengthening the system of supervision and the participation of the community through the formation of school management committees, parent-teacher associations and community learning centres. Community learning centres emphasized functional education responsive to community requirements and provision of educational experiences for all community members. Another interesting development involved the establishment of community schools attached to selected secondary schools so that trade courses could be arranged outside school hours for both members of the community and the school students. Increased financial and physical support has also been provided to schools run by the community.

19. Many of the problems encountered in achieving adequate educational opportunities require that curriculum review, teacher training (both pre-service and in-service) and management and administrative arrangements are closely interlinked and are focused upon reform and improvement. For instance, teacher training was seen as an essential component of curriculum reform, while curriculum review and reform was regarded as a necessary means of eliminating sex-role stereotyping. In one country, for instance, a variety of studies are being undertaken to identify the impediments to women achieving promotion to positions of influence in educational administration, to facilitate the achievement of girl students in science and mathematics, and to encourage greater self-esteem among boys and girls.

20. Several countries reported major curriculum reviews. In one country, a new primary curriculum has been designed which emphasizes communication and computation, religious and moral values, physical fitness and aesthetics. Subject areas are being integrated and environmental education is being infused into various components. Remedial and enrichment processes are in-built and pupil activities are emphasized using graded materials. General education is to be made available at the secondary level and the overall development of the individual is to be given priority.

Particular issues being considered are the place of specialization and the nature and place of vocational education. An important focus is also the place of manpower planning, and several countries are paying close attention to occupational opportunities and the provision of vocational education.

21. Several countries reported that new policies were being implemented to improve supervision skills and forms in their systems, including separating inspectorial, administrative and advisory functions of supervisory personnel. Attention to these matters was felt necessary to cope with new organizational patterns and the decentralization of administration taking place in several countries. Reforms in the planning and management of schools were seen as key factors in achieving educational quality.

22. Population education was identified by the participants as a crucial subject area but one too large to be established as a programme area in APEID. Attempts would continue, however, to infuse it into all relevant areas of the curriculum. It was noted that this was a matter that extended well beyond the education sector.

23. One country stressed that its recent membership of APEID and the resulting participation in activities had encouraged the national programme of universalization of primary education and had broadened the view of educators. Another country highlighted the fact that since many APEID-related activities were integrated with the development activities of the country's institutions, it was difficult to pinpoint which ones were APEID's and which were not. However, pilot studies on alternative delivery systems such as the Pamong primary school (child education by the community, parents and teachers), small schools, learning posts and special education have been conducted with a view to their integration. The designation of the Pamong and small school as alternative delivery systems supporting the policy of universalization of education at the primary level was based on several reasons including the aim to provide an alternative system to cover pupils who are not able to regularly attend the conventional school, particularly the dropouts and those who live in sparsely populated areas. Another notable new policy in the country has been the development of "Income Generating Learning Groups."

24. One country is currently making studies on teaching and learning difficulties in rural areas where dropout rates are very high. Materials and textbooks are being made available free of charge to encourage maximum enrolment, and women teachers are being trained to promote female education under the Equal Access of Women for Education Project.

25. In another country, the slow rate of improvement in the literacy level of the population by the traditional methods has activated policies stressing non-formal education, innovative approaches, economical structures and improved methodologies. The priorities of the country include physical facilities, and achievement studies. This is regarded as a basis for the development of primary education. Other areas of activity include the reform of school supervision, the development of Mosque schools, the identification of village educators to teach girls functional skills and scholarships for grade IV/V girls, the development of industrial arts and home economics, and the production of cassette textbooks.

26. Greater efficiency, effectiveness, equity and excellence were the major thrusts of another country. The aim is to improve all aspects of elementary education with a view to decreasing the disparities between the 13 regions of the country. A major project currently addresses the many problems of elementary education including curriculum reform, buildings, equipment, textbook production, teacher training and orientation and the management of information. In another country, the balance between quantity and quality was stressed together with the necessary compromises between the wish, the need and the possibilities. The desirability of close links between school, family and society with special reference to productive work was also stressed. The literacy level of minority groups and isolated people were issues raised by several countries. To facilitate the improvement of participation in primary grades, one country is considering an eight-year elementary school. Here also, an attempt is being made to rationalize the organization of schools by grouping them in clusters to facilitate the management of units in a viable size.

27. Health and nutrition are important for children for them to grow normally and learn well. 'Health for All' is an accepted programme in all countries. It is an important area to be included in teacher training programmes and in one country, for example, it has been closely associated with pre-school education. The establishment of health programmes at the pre-school level for the education of mothers and children was regarded as an important element of integrated rural development and a step in the improvement of the health and educational status of communities. Overall, policies should continue to be developed involving the co-ordination of other agencies with the education sector.

28. Concern was expressed by a number of participants regarding the status of statistical data collections, particularly as they applied to education at the primary level. The establishment of targets and time schedules together with planning resource needs and facilities is heavily dependent upon satisfactory data bases. The means of gathering and assembling data in the education sector and presenting it in ways that can be utilized by policy makers and planners was regarded as a priority concern.

29. It was evident from statements from the countries that the application of technology in education including advanced information systems such as microcomputers and associated software was assuming increasing importance. Several countries reported plans to increase or introduce programmes such as the application of the computer as an instrument or aid for learning and teaching, computer studies, and the use of the computer in educational administration, planning, management and research. It was felt that unless the education sector responded to these new technologies already pervasive in industry and the business world, the adults of the near future would be disadvantaged in the world of work and society. Much work needed to be done to review curricula to accommodate the potential of the computer as an educational tool and substantial pre-service and particularly in-service programmes would have to be mounted to equip teachers to deal effectively with the new technologies. Countries also saw the need to develop national guidelines for the use of computers in education to ensure compatibility between hardware so as to maximize the use of software and to achieve economies in the acquisition of hardware. It was

also observed that the experiences of advanced countries in the use of expensive modes of computer utilization should be critically studied. Special consideration needs to be given to the recent developments in micro-computers which are opening up new vistas of computer application in the field of education.

30. The application of TV and VTR systems was also being actively pursued in some countries along with further development of radio services.

31. These information systems were seen as important educational devices with valuable spin-offs in both the formal and non-formal areas and in relation to distance learning.

32. Much emphasis was given to the place of moral education in the curriculum. There is an almost pervasive erosion of values; in some countries, it is partly attributable to rapid technological change and urbanization. Several countries indicated that efforts were being made to develop suitable strategies, approaches and programmes for value orientation in education with a view to strengthening the moral base of society. In one country, curriculum experts are engaged in designing a syllabus and developing text materials in moral education. Efforts are also being made to produce methods for promoting value orientation among teachers as well as students. Moral education was also seen as making a substantial contribution to international understanding and harmony between peoples and communities. The support of APEID through joint studies and exchange of experiences was suggested.

33. 'Science for all' was given priority by all countries, and this topic is addressed in detail in the report of Group B. In one country, a committee has been established for the promotion of science education and a centre has been founded with the responsibility for the development of instruction in mathematics and science. In another country, the Ministry of Education and Culture and the National Science and Technology Authority have pooled their resources to develop a research-based science education development plan for all levels of education. This will provide guidelines and identify priority areas for policy-makers and decision-makers at various levels of the education system. The introduction of science concepts into the primary curriculum was an important field of endeavour.

34. In the region, considerable attention is being given to vocational education including its place in general education. In one country, a major curriculum reform involves the addition of a new work-oriented subject called 'life-skills' into grades VI-VIII. Occupational surveys are being conducted in several countries to produce a better fit between vocational education programmes and the world of work. In one country, an examination is being made to determine the appropriate place of vocational education in the levels of education and at what point it should be introduced. In another, a 'learning and earning' project is being implemented. In rural areas, countries are giving attention to the link between curricula and the agricultural life of the people.

35. A number of other important areas of policy development and emerging priorities were highlighted by the participants. These included, evaluation including

learning patterns and system performance; improving capacities to interpret research results for policy-makers and planners; and the development of environmental education programmes. In regard to urban areas, it was felt that ways should be explored in which the community itself can be used as an educational facility. Innovative solutions could also be developed whereby scarce land area can be optimally used and classroom space can be shifted in response to population changes. A large number of innovations have already been tried and reporting on fresh ideas would be timely. Co-ordinated action to deal with the problems of slum dwellers was also seen as requiring attention.

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Part Three

Report of Group A

UNIVERSALIZATION OF EDUCATION AT THE PRIMARY LEVEL

1. The following documents were available to the Group.

   i) Annotated Agenda;

   ii) Report of the Task Force;

   iii) Discussion paper prepared by the Unesco Secretariat–proposed design for national studies;

   iv) Summary produced by the Consultation Meeting rapporteurs; and

   v) The report of the Workshop on Universalization of Education at the Primary Level.

Definitions

2. It was generally agreed that the following three points provide a framework for a discussion on the topic of universalization of education at the primary level.

   a) *Access.* There are several groups of children covered here.

      i) Children living in areas where there are no schools or alternative learning facilities for them. These facilities will have to be provided before children could be enrolled. A survey would be essential to ascertain the areas where schools are needed. In areas where schools are not possible, access could be provided by the existing schools through setting up learning centres at homes and other places. It will also cover other types of education besides the formal system in a country.

      ii) Children living in areas where there are schools but they do not attend for various reasons. Motivation for children and parents is seen as a problem among others needing attention here.

      iii) Children living in areas where schools do not possess minimum facilities.

   b) *Retention/completion rate.* Universalization cannot be seen to be effective unless the children are retained long enough in the system to attain minimum standards. (Such standards are generally set by the national governments). Two major problems in this area were discussed: repeaters and drop-outs.

Repeaters

In some countries this is a problem as some children are allowed to repeat the same grade many times. In other countries there is automatic promotion which may lead at times to children not achieving required standards.

Drop-outs

This is a major problem in all countries and reflects one way or another the problem of motivation on the part of children, parents and communities. It was pointed out that if drop-outs from schools continue in the non-formal education programmes, they cannot really be considered drop-outs though it would be difficult to identify them in a data base.

c) *Achievement.* Standards differ from country to country. But in each country there are basic requirements that children would be expected to meet. Curriculum development and teacher education need constant attention to help children attain the required level of achievement. It was recognized that primary education should serve five basic purposes.

a) Development of 'basic skills' in numeracy, literacy, and communication;

b) Development of 'life skills' for meaningful interaction with the physical and social environments of the learners;

c) Introduction of 'work experience' to provide children with the ability to help themselves and to orient them to the work processes of society;

d) Promotion of values including moral values;

e) Development of good attitudes towards further learning.

4. The Meeting recognized that each country has to decide for itself the scope of universalization in the light of its particular context. Each country also sets a target date for the achievement of universalization of education and decides for itself if, when and how education to this level should be made compulsory.

Guidelines for national studies

Objectives of national studies

5. The purposes of the studies should essentially cover the following three points:

a) To review the present situation—national policies, structures, plans, programmes, projects and outcomes of research findings. As a result of the above, directions should be indicated and where applicable recommendations be made for renewal and strengthening of national efforts;

b) To finalize indicators, appraise statistics, fill gaps and make recommendations for updating the data-base;

c) To suggest exchanges and co-operative work with other countries in the region in relation to critical national needs and for sharing experiences and comparing achievements against targets periodically.

Scope of the national studies

6. The national study should not be only a status study (describing the situation as it is), but also a blueprint for action to achieve universalization by the target date set in the national plan.

7. As the Member States conduct their studies, they should be encouraged to do so on a regional/provincial basis within the country. Disparities between regions/provinces and also within regions/provinces will then stand out and information will be useful in future planning.

8. The Group suggested that the studies could well cover the following:

a) Some general background information about the country (demographic, geographic, socio-economic, cultural, etc.);

b) The country's definition of universalization of education at the primary level;

c) Constitutional/legal position:

i) Constitutional provisions;

ii) The status of compulsory education:

- legal provisions;
- status of enforcement.

d) The present education system:
This would follow the key indicators as mentioned below.

e) National policy for both formal and non-formal systems:

i) Established policy;

ii) Target date;

iii) Major content of plans;

iv) Innovative approaches.

f) Planning/administration: national, state (province), local;

g) Programmes and projects undertaken in the country that are helping to achieve universalization. For each project give the specific objectives, target, structure, content, administrative/supervisory/professional/support aspects, evaluation and monitoring arrangements, budget, innovative aspects;

h) Future plans:
This could include innovative strategies that a country is planning. It should include alternative systems as well as the formal system;

i) Problems and constraints;

j) Areas of possible co-operative work, joint studies, exchange of experiences between member countries of the region.

Key indicators

9. The Meeting studied the list of critical indicators recorded at an earlier workshop[1] and made some amendments. The Meeting emphasized that any guidelines which are set out for the national studies would be used flexibly by the countries in a way that will help to attain the stated objectives of the national studies. While some of the key indicators will be particularly relevant to certain countries, some others may not be applicable.

Global indicators

a) i) Availability of facilities for schooling within walking distance of the child;
   ii) The state of buildings and equipment;
   iii) Level of literacy of the community

b) Enrolment—size, growth rates, sex in relation to the relevant age-group

c) Retention/completion/survival rates. Attention should be paid to: (i) repeaters, and (ii) drop-outs as applicable

d) Transition rate from primary to general secondary education

e) Teachers:
   i) The numbers of teachers broken into male and female;
   ii) Qualifications of teachers and the numbers at each level of qualification;
   iii) Frequency and duration of in-service training, prescribed or actual, for a stated period of time

f) i) Teacher-pupil ratio;
   ii) Teacher-supervisor ratio;
   iii) School-supervisor ratio;
   iv) Frequency of external supervision;
   v) Internal supervision: frequency and time allocation

[Note: For some countries internal supervision is more important than external visits by supervisors. Therefore (ii), (iii) and (iv) above would be largely irrelevant and a description of internal supervision should be given.]

g) Percentage of expenditure on primary education:
   i) Teachers' salary;
   ii) Teaching materials and facilities—buildings, equipment, furniture including maintenance;
   iii) Administration, supervision, monitoring;
   iv) Planning and development;
   v) Other items as may be detailed in the budget;

1. Regional Workshop on Universalization of Education at the Primary Level, ROEAP, Bangkok, 1-10 December 1982.

h) Budget:
   i) Total budget for education;
   ii) Budget for primary education:
      – Total amount;
      – As a percentage of (i);
   iii) Per capita expenditure:
      – At the primary level;
      – Compared with other levels of education
i) Incentives (uniforms, books, lunches, etc.)
j) Multi-grade teaching:
   i) Single-teacher schools;
   ii) Two-teacher schools;
   iii) Others with multi-grade teaching
k) Forms and levels of professional support
l) Forms and levels of community participation
m) Programmes on out-of-school children
n) Any other features

Indicators for girls

10. The Group recommended that a separate section should be devoted to the education of girls.

11. Details on all points (a) to (n) under *Global indicators* should be given where applicable and possible.

Indicators for other disadvantaged groups

12. These will vary from country to country. They will include such groups as:

a) Rural;
b) Tribal;
c) Ethnic minorities;
d) Physically disabled;
e) Those living on remote and difficult terrains;
f) Any others.

13. Details on all points (a) to (n) under *Global indicators* should be given for each group where applicable and possible.

Timetable for national studies

14. The Group was of the opinion that a regional workshop for those conducting the national studies could be held in mid-November. This means that the national studies need to be completed and a draft report written to be brought to the regional workshop.

15. The final reports need to be completed and copies sent to the Unesco Regional Office in good time for a regional report to be written for tabling at the forthcoming Ministers' Conference in the second half of 1984.

National workshops

16. The draft programme provides for some national workshops on education to be held in the countries. The following suggestions are proposed as guidelines for any such workshops:

a) Purpose(s) and theme(s) of the workshop(s);
b) Timing of the workshop(s);
c) Workshop arrangement: one workshop with many sessions or a series of workshops in different localities;
d) Organization procedure;
e) Planning groups, if any; their composition, objectives, time schedule;
f) Specific objectives of the workshop(s);
g) Participants.

Strategies and activities at regional and national levels

17. The Group accepted the table appearing on page 32 as a broad schema of the strategies and activities which APEID could pursue in support of its programme on the universalization of primary education (UPE). The left-hand column represents the areas of APEID's concerns, while the boxes to the right indicate important aspects of each area which APEID can use to plan its strategies and activities.

18. The schema presents a number of structural and functional elements in the formulation and implementation of the programme of universalization. The left-hand column indicates the various tasks that need to be planned for and executed. The boxes at the right-hand indicate organizational structures that need to be built, the target groups for whom specific programmes need to be initiated to promote their awareness, knowledge and skills; and the experimentation that must be undertaken to make implementation more effective (for instance, curriculum development, instructional methodology). The terms indicated in the boxes are self-explanatory and familiar to the planners and administrators concerned with planning and execution of educational programmes. However, some terms are explained below for illustrative purposes.

a) Situational analysis and new assessment (Line 1) would refer to the determination of the characteristics and needs of target groups/areas for which specific programmes are to be developed and executed. A micro level analysis of the status of facilities and future requirements would help in designing programmes which will meet the specific requirements of specific groups.

b) Other learning centres/channels (Line 2) refer to learning facilities—formal, non-formal and informal—not directly under the educational authority, for instance, local institutions (like mosques, churches and temples), farms and workshops can become important resources for learning of attitudes and skills. The radio and, wherever available, the television channels can be used for promoting learning.

c) Planning, implementation and evaluation (Line 3) refer to the desirability of involving the local communities in these processes so that they develop a commitment to and a stake in the effective implementation of programmes.

d) Teaching/learning strategies (Line 4) emphasizes the desirability of modifying the existing methodologies in the light of the specific handicaps from which children coming from certain sections suffer. It also refers to the urgent need of making instruction more effective in terms of learning outcomes.

e) Software developers (Line 5) is the category of personnel which will be in increasing demand with a systematic utilization of mass media for educational purposes. Training programmes, for instance for script writers for radio/television programmes, will have to be organized.

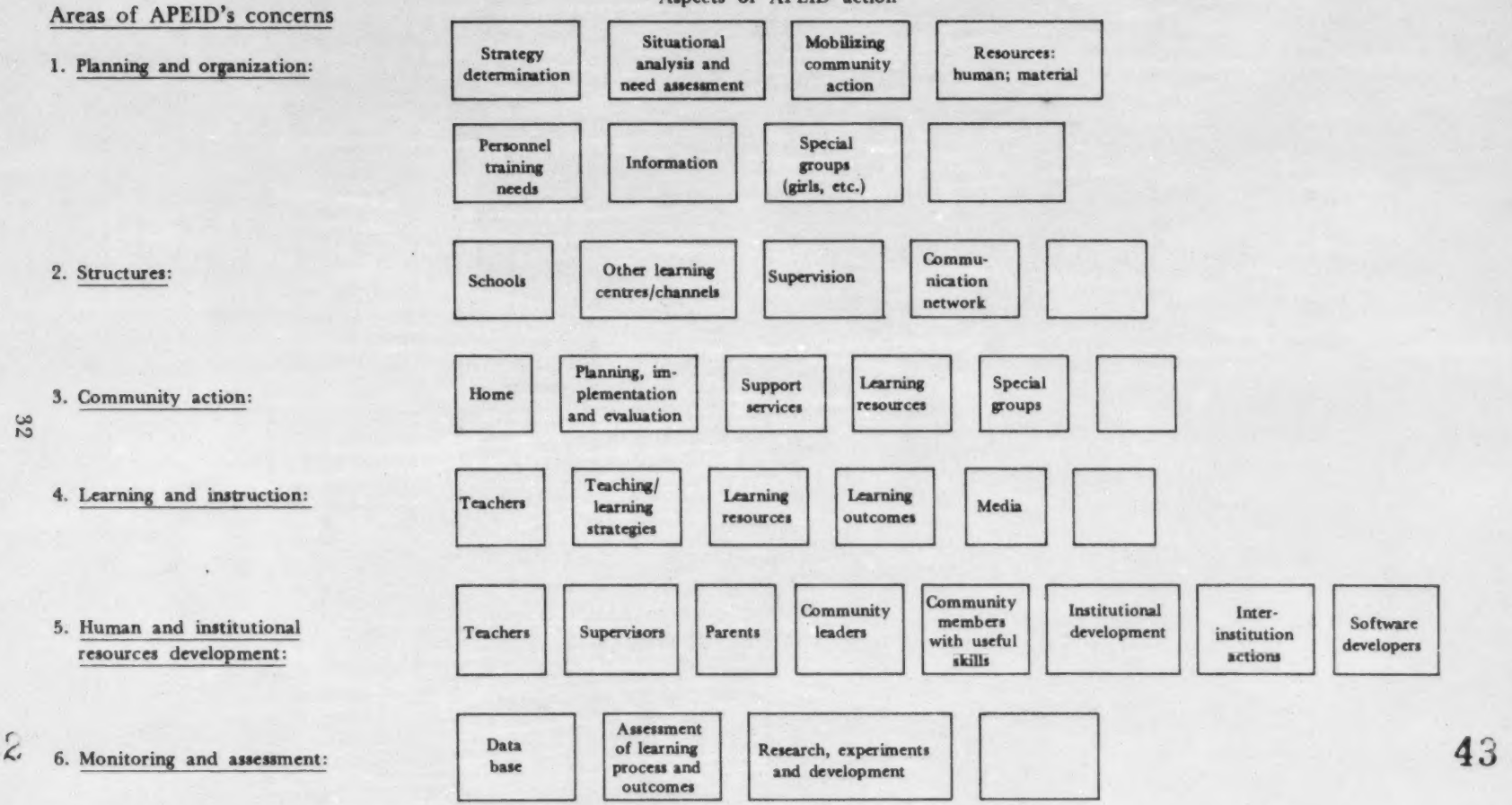
f) An adequate data base (Line 6) is essential for planning. In relation to the programme of universalization, a variety of data is required, e.g., on areas not covered by schooling, retention and drop-out rates, status of physical facilities, etc.

19. There was general agreement that a major emphasis must be placed on activities at the sub-national and micro-levels (for example, regional, provincial, local, community and village levels) if UPE is to become a reality in the region. Activities at these levels must incorporate participation in planning. Part of strategy determination must be to work out the roles of the national, regional and local authorities. The last of these would need specific training to perform particular tasks relevant to the UPE programme. Some countries have made progress in developing educational expertise at the macro-level, and the experience gained in these efforts would be an invaluable input to the UPE programme as a whole.

20. The Group felt that training at all levels and in all areas was essential. The levels extend from the local community through the regional and then to the national level. Each of the identified areas of concern depends on an appropriate activity at each level of organization for a successful outcome to be achieved.

21. The different parts of the schema presented on page 32 are inter-connected, and various connections could be made for particular purposes. For example, if one focuses on training in **Teaching/Learning Strategies** one is soon led to consider at least the following aspects: **Learning Outcomes; Learning Resources; Media.** It was agreed that the table facilitated understanding of the problems associated with UPE by providing the basis for developing a network of activities, given an initial focus.

22. A major point for discussion was the training of teachers in connection with the UPE programme. Two trends emerged in the discussion, one focusing on the conventional role of the teacher in the primary classroom, and the other on the demands made on the teacher in the context of universalization. It was clear that in this latter case the teacher has to work closely with the local community, and thus special attention needs to be given to devising self-development materials for the teachers themselves. This need must be met at the same time as the teacher is made more effective in his conventional role. It was emphasized that to be fully effective all modes of teacher education need to be followed and integrated with continuing in-service education.



Universalization of education at the primary level – frame for action

Planned activities in the region

23. The Group agreed to the planned activities for 1983/1984 in the area of UPE, with one addition. It recommended that country visits be included under UPE/1 to make a fifth specific action. A team of two-three experts from a country in which a national study has been made would visit some other selected countries to exchange ideas and to examine how the various aspects of UPE programme are being implemented in the visited countries. These experts should include a planner, a trainer, a person concerned with learning resources.

24. The programme in UPE for 1983-1984, then, is as follows:

1983

UPE/1 Policies on universalization of primary education

a) Support to national studies and national workshops
b) Inter-country visits of national teams
c) Regional meeting of national study teams
d) Advanced-level workshops
e) Support to national conferences.

UPE/2A Meeting the learning needs of children—Regional Seminar on Textbooks and Reading Materials.

UPE/2B Meeting the learning needs of children: training teams.

a) Invite consultant and make desk study
b) Prepare papers on contract by Associated Centres
c) Technical Working Group on the nature of learning and future research
d) Technical Working Group on training programme for teachers, supervisors and other concerned personnel.

UPE/3 Promoting better health and nutrition education—national workshops.

Selected countries will be contracted to organize national workshops.

UPE/4 Study on raising the achievement level of children.

a) Organize task force
b) Contract for national studies
c) Negotiate for first meeting
d) Hold first meeting.

UPE/5 Attachments/internships and inter-country exchange of resource persons.

Provide training through attachments at Associated Centres.

UPE/6 Development of information and documentation services

a) Develop bibliographic materials
b) Make short film on UPE theme.

Eighth Regional Consultation Meeting

UPE/7 Meeting the learning needs of children—preparatory action.
A study of new development in mass media and projects;
A consultation with AIBD and preparation of plan of work for 1984.

UPE/8 Innovative capacity of schools—preparatory action
a) Identification of research done on the subject.
b) Preparation of technical paper and study design.

1984

UPE/1 Policies on UPE
a) Support to national conferences on education (continued from 1983)
b) Constitution of a Regional Programme Panel on UPE
c) Advanced-level workshops (continued from 1983)
d) Inter-country visits of national teams (continued from 1983)

UPE/1A The development of new structures

UPE/2 Meeting the learning needs of children
a) Mobile team workshop for textbooks and instructional materials in UPE
b) Sub-regional workshops on the learning problems of children from the deprived environments
c) Support to pilot national training workshops on educational opportunities for girls in UPE
d) Regional workshop on mass media in UPE
e) National pilot projects for reducing dropout rates.

UPE/3 Promoting better health and nutrition education in UPE.
The outcomes of 1983 workshops will be distributed.

UPE/4 Joint action studies
a) Raising the achievement level of children
b) Teachers resource kits.

UPE/5 Attachments/internships and inter-country exchange of resource persons.

UPE/6 Development of information and documentation services.

Part Four

Report of Group B

PROMOTION OF SCIENTIFIC AND TECHNOLOGICAL COMPETENCE AND CREATIVITY (WITH FOCUS ON SCIENCE FOR ALL)

Introduction

1. The last two decades have seen a remarkable change in the perception of developing countries of science and of education. There is a greater awareness and realization that applied science and technology are key factors in the modernization process. While the base and form of the modernization process would vary from country to country, competencies in science and technology would be a common goal for all. Such competencies are sustained and promoted when a scientific outlook exists in the population. Only then would innovations be accepted readily for improving the living conditions of all the people. Competencies are not only attainable through better training approaches; effective education in science is indispensable.

2. It is important that education in science begins as early as possible and is directed to all sections of the population. The preparation for improving science education and extending scientific literacy to all sections of the population could be considered very important at present to enable the applications of science and effective use of technologies in national development.

3. Apart from preparing the needed number of competent and creative scientists and technologists, the building of scientific understanding, attitudes, values and skills, among the general population, has to be regarded as major national development thrusts in the development of science and technology education. The report of CASTASIA II emphasized the need for the introduction of science and technology education at the primary and through secondary level as a prerequisite to subsequent education in science and a basis for developing an appreciation of science, no matter how rudimentary and the level of technology encountered in everyday living.

Past efforts in science education

4. Considerable efforts have already been directed towards the improvement of science education during the past two decades in almost all the countries of the region, and many advances can be identified. However, the majority of these efforts have mainly been confined to the formal school system. The result of this is that a sizeable population of school-going age children and who are not in the schools, youths (mostly school drop-outs) and a large population of adults have hardly had any chance

of developing a minimum level of scientific literacy and an appreciation of the potentialities of science and technology for improving their living conditions.

5. Though science under different names and designs has found a place at the first level of school education in most of the countries and at the secondary level of education as well as in others, 'Science for All' as an approach has not always been clearly spelt out. Besides this, the relevance of the science taught, and the way in which it is taught, also has been questioned. It is for this reason that continuous efforts, which are mainly through curriculum development and training of teachers, are being made to design innovations which will enhance the relevance of science experiences being provided as part of general education to enable the learners to improve their living conditions and develop positive attitudes and values which will contribute to the development of a 'scientific temper' and become familiar with processes of science which could then be related to daily living.

6. The Medium-Term Plan of Unesco observes that science and technology are now an integral part of contemporary culture and science, in its various forms, has become an essential means of understanding the world. In addition, it has also provided man with a tool for organizing his thinking and classifying and exchanging experiences. Some of the essential tasks of general education, therefore, are to impact the basic scientific and technological understanding necessary to prepare the younger generation for the practice of an increasing number of occupations, specially in the productive sector; to encourage scientific and technological vocations; and to foster awareness among young people and adults of the interrelationships between science, technology and society.

Important issues relating to the development of a comprehensive programme for 'Science for All'

7. With a view to developing the concept of 'Science for All' which should be a comprehensive one and encompass most of the efforts which have already been made during the past two decades to promote science education and public understanding of science and technology, the Meeting considered the following questions which would also provide major issues for deliberation of the present and the future APEID activities:

a) Why teach science to 'ALL' ?
   - need; role; purpose

b) Who are these 'ALL' ?
   - identify broad groups and their characteristics in terms of learning needs for science and technology (including vocational and technical education)

c) What sources could help provide needed directions for science and technology education? Is there a S & T policy? A socio-economic development plan? What studies can be undertaken to provide some answers?

Implications for curriculum and instruction

d) What are the implications of 'Science for All' for the existing curriculum? What kind of science will be relevant to meet the needs of each target group in the light of socio-cultural aspects? What emphases in objectives: cognitive, psychomotor, affective (values and attitudes). What relevant information to be imparted—how to identify the content. How should the curriculum be organized: diversification? Or the same for all?

e) What are the implications for instruction? What strategies need to be emphasized?

New roles, organization, delivery system

f) What infrastructures would need to be developed or what new roles will have to be assigned to existing institutions? How to involve more effectively the NGOs and private education groups?

g) How to deliver the above science to the target groups—what alternatives; what new competencies for existing personnel?

Community and resources

h) What role can the community play and how can the 'outreach' of the formal education system (the school) be extended to cover some of the needs of other identified target groups?

i) What resources need to be mustered? How to find them? Need for allocation of needed resources and co-ordinating the efforts of various agencies involved—focus on locally available resources, expertise and the environment. The need for establishing linkages to facilitate co-ordination, expand learning to outside the classroom walls.

Teaching/learning processes (creativity and others)

j) How to promote creativity and open competence and create a total national climate supportive of science and technology endeavours—its potentials and dangers?

k) How to teach towards development of intellectual skills/higher cognitive skills, of values consistent with socio-cultural environment and development goals of the country?

Computers in science education

l) Computers in science education: where and how to begin?

Proposals for a regional programme

m) Suggest elements of a regional programme with focus on regional co-operation within the APEID context.

'Science for All' – Who the 'All' are

8. 'Science for All' has two words that need careful attention—Science and All. All people, at school and out-of-school, now live in societies that are increasingly influenced and dependent on the applications of scientific knowledge through technology. However, the advantages of these applications are very unevenly experienced and in many countries, development at a personal, community and national level is hindered *because* of the lack of trained scientific and technological personnel and *because* the advantages that science can bring are not understood by the many other groups in society.

9. The last 25 years of endeavour in the improvement of science curricula in many countries has led to an improvement in the supply of expert personnel in the various fields of science and technology. This role for the school system involves the preparation and selection of a select group of students in mathematics and science who go on beyond school to further education where they are trained for the science-related professions and technologies. There is no doubt that the improvements in this type of science education will need to be maintained and strengthened still further.

10. However, a number of reviews of the past 25 years of science education suggest that very little progress has been made in achieving a positive and worthwhile experience of learning in science for the great majority of the other students who enter school. We have not been sending from schools into the community young people with an appreciation of the potential of science and a familiarity with its processes and attitudes.

11. The *All* part is a recognition that we must now turn our attention in science education to the majority of society, while maintaining the gains that have been made in specialist science education.

12. In tackling this task, it is important to see the *All* in terms of broad target groups because the science education they will need and particularly its delivery systems will need to be prepared with these groups' primary needs and situations in mind.

13. Four broad target groups for 'Science for All' have been defined:

Group A: The formal school population (at least the first ten grades) including those who will proceed further with science and technology education;

Group B: The out-of-school children and youth, including school drop-outs and those who should have been in schools under the universalization of education process;

Group C: The work force including the vast numbers of illiterates; and

Group D: The educated section of the populace.

14. Some of these groups are themselves very diverse: **Group C**, for example, has many sub-groups, and the needs of subsistence rural workers for science education will clearly be different from those engaged in industrial work of some kind. In **Group D**, there will be many different needs, but in this group there is a major need

for an appreciation of the potential of science because these people are influential in decision-making in society and in providing a climate of opinion about scientific innovations and technological change.

15. Much of the concern—and effort—in science education has been and still is very much associated with the schooling system or the wider formal education system. In acknowledging as key target populations for science education **Groups B, C,** and **D,** is important to recognize that they present quite new challenges with which experience in the schools will be of only little help, particularly in the fields of resources and delivery.

Concept of 'Science'

16. Turning now to the other word *Science*, we can begin by acknowledging the limited meaning that has been given to this great field of human endeavour in the first phase of the curriculum movement. The content of science teaching has very strongly been drawn from the knowledge content of the three broad disciplines of chemistry, physics and biology.

17. The facts, concepts and processes that have been emphasized for learning and teaching are important building blocks for those who might go on to train in these fields after school. In other words, content for learning in science education has been very much determined from within science itself, rather than from the needs of society for science. Even when curriculum developers have drawn on social issues, and work and life experiences for the content of science education in primary and lower secondary education, there has been a tendency in teaching to play down these aspects and still emphasize the conceptual and theoretical knowledge which for many students ends up being a matter of rote learning or not at all—outcomes we could describe as 'anti-scientific'.

18. With the richness of science and technology at our disposal, it will be important to develop very clear criteria that will guide the developers of the curriculum of 'Science for All'. This will be a first step that will help in selecting appropriate content and material from what already exists and in the major tasks of deciding what else should be included as appropriate and necessary.

19. There seems to be very common agreement that, alongside a minimum of basic relevant scientific information, the major goals of 'Science for All' are the development of certain ways of thinking and acting that stem from a familiarity and confidence with what are described as processes and attitudes of science.

20. It is also very widely agreed that most persons will only acquire this type of learning about science if it is set in a very meaningful and socially relevant context.

21. A beginning has been made in establishing these criteria of worth and the following are given as suggestions that can lead to others and to the refinement that will come in the next stage when actual examples are developed:

a) Any topic or section should have meaning for learners that is not dependent on later year learnings (i.e. preparation for higher years of schooling is not a justification).

b) Most learners should be able to achieve some level of learning in each section.

c) Content should be based on obvious experiences of the learners or have immediate application outside schools or create an immediate sense of wonder.

d) Content should lend itself to experiences and the use of practical science processes that are meaningful to the learner's life.

e) Science concepts to be learned must have obvious application in the real world of the learner's outside school.

f) Content should be able to be discussed by teacher and learners about its social implications.

22. A number of broad fields to which science has obviously much to contribute can also be listed. Each of these can also provide specific topics for the sort of science education that the four population groups will need. At each stage in the development of these specific topics of science curricula for learning, the check against the new criteria of worth will be needed.

23. Such fields could be Measurement and the Senses, Our Universe, Our Bodies and their Health, Nutrition and Sanitation, Population, Ecology, Environment, Individual and Community Uses of Technology, Use of Energy, Presentation and Use of Resources (natural and man-made), Creation and Control of Pollution, and Quality of Life.

24. To maintain in schools a proper priority for this 'Science for All' alongside the traditional preparatory role for science education, it is important to think of a threshold—primary schooling in some countries, a higher level in others—below which every learner will be provided with the maximum opportunity to learn the type of science that is now emerging under the slogan of SCIENCE FOR ALL.

Learning needs and delivery systems

25. One of the basic principles of science is that structure, form and function are related closely. This principle is valid in many walks of life including the educational system which so far has concerned itself mainly with the formal system and its captive audience. The learning needs of people out of the formal school system, the content of the message directed at them and the manner in which the message reaches them, all decide the success of the programme. In other, and in more formal terms, the instruction and instructional material must match the felt needs of the target group, if any success is to be achieved in bringing about a change in behaviour of this group.

26. It is also important to realize that the delivery system and the message have to be mutually compatible. A mismatch could lead to a total wastage. In this field, considerable research inputs are needed. It might be a good idea to sponsor, support and encourage research in software in this field. While millions are being spent on hardware, very little is being done to generate adequate software, in the absence of

which the enormous infrastructure in hardware becomes either useless or serves as a delivery system for run-away entertainment.

27. In discussing the delivery systems for various groups, it would be convenient to consider the needs of different groups separately. For example, the **Group B** consisting of children who are not in the school but who should be in school has special needs. Firstly, their linguistic ability is not as developed as for the other groups. Secondly, the most important need of this group is to find a meaning and purpose for their life which would give them a relatively higher status in life than if they were to end up as unskilled manual workers. Also, this group, being in an impressionable age group, need guidance and active help in many walks of life. The instructional materials and the delivery system should take this into account.

28. To a certain extent the very process of being drop-outs has hurt their self-respect. If this self-respect is to be restored, an effort would be needed to identify skills, tasks, expertise, needed by the community around and to train these out-of-school children to play a meaningful role which would earn them money as well as a purpose in life. For example, a large number of projects and schemes are launched in most rural areas of developing countries. Schemes to promote the green revolution, improving milk supply, giving better health care, improving food production through poultry farming, etc., are some examples, each of which has a science component. However, by definition, most countries do not have so many field workers to go to every area and provide support to the community on a continuing basis. These out-of-school children could be trained to play these roles effectively. There is enough evidence to show that this can be done.

29. The class of work-force has its own special needs. One of them is an opportunity to lead a better life by improving ability to perform higher tasks. Secondly, the group needs information on the availability of resources to fulfil this need. For example, if short-term courses are offered to convert unskilled workers into semi-skilled ones, the first need is to know that such facilities exist. Also, as responsible adults in the family, they need to know how best they can look after their family. Basic information regarding primary health care and nutrition would be useful. In the total absence of such information, they tend to give up, considering the situation as hopeless. These are some examples.

30. The needs of **Group D** are not only special, they are also crucial. Many of them are in decision-making positions. Their need is for information which is organized in a meaningful pattern.

31. Though a large number of delivery systems exist even the well identified ones have not been exploited fully. An optimal utilization of some of these merits special consideration.

32. The formal school system (including secondary and tertiary) has a large number of teachers who are competent to play a role beyond their normal working hours. Many of them have played a crucial role in awakening their countrymen in their struggle for freedom. If they can see poverty and ignorance as an evil to be eradicated, there is no reason why their energies cannot be channelled into a very

strong delivery system. This aspect is of considerable importance in countries that have acquired political freedom relatively recently where the role played by the teachers is still remembered by the people. Two points need to be mentioned in this context. To help the teachers to play this role, the objectives and contents of the message must be very clear, and the message must have a sense of urgency. Unfortunately, this channel has not been explored at all in most places.

33. The role of the tertiary and university science and technology teachers is also equally important. Some of these teachers have been noted for giving excellent popular lectures on many aspects of science and technology, including aspects like impact of science on society. They have however been *ad hoc* in character. There is need for these activities to be pursued in an organized manner by informed groups.

34. Another resource would be school science students who can influence the communities through their science-based activities, either directly or through the media.

35. Many socio-cultural channels also exist in most countries. An effort could be made to utilize their services to spread the message of science. While the tools at the disposal of this group might appear to be primitive, their impact is far from trivial. They do have considerable strength in creating public opinion in rural areas. It is desirable that this force be aligned with the other forces that one contemplates bringing into action.

36. Newspapers, radio broadcasts and TV networks are now available in all the countries of the region. Ways should be found to use these powerful channels more extensively and effectively.

37. Considerable research and development inputs are needed to identify the nature of programmes that should go on these media. Priorities like community sets installed in public places, science-based programmes that illustrate the method of science and do not hesitate to discuss current issues and above all programmes aimed at encouraging the audience to do something, rather than listen passively, would have to be designed. Such programmes have to be generated locally since they are target specific. People engaged in these programmes may be brought together periodically for exchange of experiences.

38. Newspapers have recognized the importance of science and technology during the past two decades. Many of them now carry special columns, some offer supplements on specific days of the week, some others offer specialized weeklies and monthlies, all devoted to aspects of science and technology. While the newspapers are willing to play this role, writers capable of writing creatively on these issues are not always available in adequate numbers. For example, on current issues like use of insecticides, threats to eco-systems by a proposed project, it is easy to take a stand and write strongly; it is much more difficult to present all information and critical analysis to enable the readers to come to a rational conclusion. It is this kind of analysis that will educate the **Group D.** This argument also applies to the radio and TV programmes.

Issues in training personnel

39. In the successful implementation of 'Science for All', pre-service training is a vital component.

40. Some of the teacher educators in science should be drawn from the ranks of primary school teachers so that there is a mix of staff with a strong academic background in science and staff who are experienced in the teaching/learning processes at the primary school level.

41. All prospective teachers who are expected to teach science for all at the primary and secondary levels should have completed the full science studies course and the associated pedagogy course.

42. Pre-service training should also contain a component which would prepare teachers to work with target **Groups B, C, and D.** This component would identify the content area and teaching strategies suitable for these groups. Second-chance education is becoming a significant element of the education systems of some member countries. There is therefore a growing need for trained tutors. Tutors could include community leaders and persons with specific expertise. They would need some training which could be provided by local teachers and extension personnel of local institutions through organizing training seminars or by using distance learning methods.

43. In the introduction of a new curriculum, in-service training is of the highest importance. Success is largely dependent on the attitudes teachers have to the new programme and the enthusiasm and commitment with which they put it into practice.

44. On a national or regional scale, this could follow, among others, the 'Master Trainer Model' or the 'Teacher Release Course Model'. In the case of the former, a group of teachers and educators attend a master trainer course and then undertake, in their local areas, in-service training with principals and administrators, the school science resource teachers and teachers. In the latter case, one or more teachers from a number of adjacent schools are released to attend local courses.

Evaluation and supervision

45. Suitable test materials for process-oriented science programmes are not readily available. It is suggested that APEID make a collection of test materials which meet the criteria and are in use in the region, with a view to starting an item bank.

46. School supervisors/inspectors should, at regular intervals, carry out a survey of the standards of science education to identify the extent and nature of mismatches among the three curricula—the intended, the implemented and the attained—and take appropriate action.

47. A system using teacher educators in science who work as itinerant science advisers could be set up. These advisers could give in-depth professional guidance in the schools and provide the follow-up support to the conventional in-service courses. To fill this role, successful science teachers could be seconded for a period of time, or a science education advisory service could be established as part of an educational supervision and administration structure.

Equipment

48. To some extent the success of 'Science for All' would depend upon the equipment available for its teaching and learning. Science curricula have tended to utilize equipment that is not readily available, expensive and often unnecessarily complicated. Considerable progress has however been made in certain countries in designing equipment from locally available material and in its mass production at reduced cost.

49. The Meeting felt that in the proposed 'Science for All' which would be very much oriented to the issues of daily living, the equipment should mainly include items used in daily life and readily available locally. It is important to avoid dependence upon imported and rare equipment as this would only perpetuate the present difficulties. It was pointed out that in spite of past efforts at innovation in equipment design, the production costs have not been reduced sufficiently to bring equipment within the means of schools, especially in the rural areas. Of utmost importance, therefore, is the need to continue efforts to reduce costs and at the same time include items of common use.

50. The Meeting took note that with recent advances in technology, a wider range of inexpensive equipment and materials for domestic and other use are now available. Electronic calculators and kitchen balances are examples of this trend. It is necessary to keep abreast of such developments and constantly review equipment lists.

51. The Meeting recommended that science equipment should be maintained at the entitlement level in terms of the curriculum.

52. The care and replacement of science equipment is a major concern of all science teachers. It is evident that equipment which is used will break or wear out, despite the best efforts of the teachers. It is necessary that the administrators recognize this fact, and suitable changes are made in the procedures to take this into account. The policy-makers should be made aware that if equipment is not available, or not replaced expeditiously, the science programme cannot be successful.

Regional co-operation for 'Science for All'

53. The various projects included under this programme area in APEID's third-cycle work plan directly impinge on the various current efforts that are being made to improve and expand the teaching of science and developing public understanding of science and technology. In view of the new directions that have emerged out of the group discussions, and if a viable programme of 'Science for All' is to be developed and implemented, certain new emphases will have to be given to the proposed activities in the work plan, and some new areas of concern will have to be considered.

54. Keeping in view the concept of 'Science for All' that the Group has proposed in this report, it is suggested that the following actions be considered within the APEID framework as well as at the national level:

a) Promoting research activities related to the science learning needs and learning styles of the various target groups;

b) Organizing a technical working group meeting to make a detailed analysis to identify relevant and meaningful content for the various content areas suggested by the Group for inclusion in a formal curriculum of 'Science for All';

c) Encouraging some centres to prepare exemplar materials for the above content, reflecting the new slant of moving from academic science to a science for developing processes and values;

d) Arranging for training of instructional materials developers by using the above exemplars as starting points;

e) Collecting and disseminating information on experiences in the use of the environment for providing teaching and learning experiences;

f) Designing and developing simple science equipment using local materials and expertise, and using available household and daily use equipment and materials for science learning;

g) Investigating the various forms of linkages between formal and non-formal education programmes so as to develop guidelines for extending the reach of formal school system science teaching resources and materials to cover the needs of the out-of-school children (target Group B) and the adult population (target Group C);

h) Training science teacher educators to develop a more vital pre-service training of teachers for teaching courses on 'Science for All';

i) Organizing a study group to identify appropriate technology experiences and suggest ways and means, strategies and methodologies for incorporating this technology education component in science education programmes;

j) Developing training materials to prepare personnel for handling out-of-school science education for youth and adults and preparation of relevant instructional materials;

k) Supporting national efforts to strengthen and expand out-of-school science activities like science museums, science clubs, science fairs, by facilitating exchange of experiences through inter-country study visits;

l) Encouraging development of self-learning materials for various target groups;

m) Putting emphasis on activities proposed under Project 6 'Promoting public understanding of science, its application and implication' of the APEID work plan for its third cycle;

n) Organizing a study group to look into the possibility of introducing computer studies as a part of the secondary education curriculum.

Part Five

Report of Group C

INFORMATION, COMMUNICATION SUPPORT AND FUNCTIONING OF THE APEID NETWORK

Information development and dissemination

1. The Group taking advantage of the presence of Mr. J.B. Chandler of the International Bureau of Education (IBE), began with the second section of its work—discussions on information development and dissemination. Mr. Chandler recommended that there should be short abstracts of the material available for transmission amongst National Development Groups (NDGs) and Associated Centres. This minimizes the task of the nationals who may follow up the abstracts by requests for further information where there is need.

2. The ACEID Secretariat pointed out that this was the present procedure within APEID. APEID took advantage of the abstracts prepared by the NDGs or Associated Centres and distributed them to other groups within the network. APEID could assist with the cost if required, but the general understanding was that this was a major function of the NDG in each country. Programmes have been established for documentalists from NDGs and Associated Centres. These include annotations of materials produced by the countries, some of which might be available only in the national languages, and also the materials published by APEID relating to the country.

3. The participant from the Socialist Republic of Viet Nam pointed out that they have translators who are qualified in education, but they have difficulty in finding appropriate equivalents of the terms in APEID literature. It was proposed that some arrangement for their training should be made. A proposal emerged that ACEID would offer attachment at the Unesco Regional Office, Bangkok, to a qualified translator to get familiarized with the terms used in APEID literature and prepare a manual which would be of use to other translators in the Socialist Republic of Viet Nam.

4. The participant from Indonesia noted they have translators qualified in English but they are not qualified in education. The participants from Indonesia and Papua New Guinea desired a broader type of training including both translation of terms and illustrations. Indonesia would like to use it in some of the publications of APEID such as the low-cost inventory—vol. II which it has already translated into the Indonesian language for pilot use in the country. They saw this as ideal in solving the major problem which is to translate research in innovation into action with policy-makers, teachers and the community at large.

5. The participant from the Republic of Korea suggested three ways in which information and dissemination could be promoted:

a) Annual convention of the NDG within the country, as planned for 1983 in the country, will lead to the collection of materials on innovations into a booklet. This could be translated into English and be made available.

b) A selection committee examining the research and innovation based on Korean literature which would be made available within the country. A decision on translations is still to come.

c) Comparative educational studies that would enable the NDG to relate its programmes to those of other countries.

6. The Secretariat pointed out that during the second cycle, following a similar proposal, some literature was developed, including a five-volume study on education and rural development. In this connection, the Group considered Activity SRO/2 (Compilation of material on progress and prospect of educational innovation in the Asia and Pacific region) was a constructive move to incorporate the idea of comparative studies into the APEID programme.

7. The participant from Japan commented on the retrieval information systems being developed in Japan. He made the point that it be attained as an innovation to connect the libraries of university systems nationwide by computer. The Japan Council of Educational Technology Centres is establishing a thesaurus in Japanese for appropriate assembling of local individual needs. A Japanese group had attempted to modify the Educational Resources Information Centre (ERIC) system, but found that the local usage meant that considerable modification was required and that there was need to establish their own resource. The group in Japan will be happy to share their experiences with other countries.

8. On the subject of the dissemination of information and documents, the consensus was quite clear that international documentation centres such as that established by Thailand or similar structures such as the APEID Clearing House of the NDG in Pakistan were of immense strength to the communication process. It was felt that the existing documents of Unesco and APEID are under-utilized at present and there is need to disseminate APEID material. A number of alternative arrangements to assist in this were suggested:

a) The placing of volumes in selected libraries nominated by the NDGs;

b) Inter-loan procedures between libraries such as that carried out in Australia and New Zealand;

c) The need to see that the material selections were available to teachers especially in teacher centres and teachers' colleges;

d) A need to develop procedures to increase the functional literature of the bureaucracy;

e) Solutions for logistical problems within countries which have not yet established an effective network among centres.

9. ACEID has in the past supplied three copies to each centre to ensure that one is marked to the Director of the centre, another for circulation among the staff, and one goes to the library. The copies for the Director and for circulation are also expected to be sent to the library. ACEID made available multiple copies either for circulation to interested groups or sub-centres or for use in training courses or seminars. Where there is an established need for use of materials for training purposes, the Programme could also cover the translation cost for the material which would be used in such training courses.

10. The participant from Pakistan informed the Group that material in his country had been developed on APEID and some of its important activities for supply to about 6,000 teacher training institutions, secondary schools, middle schools, education extension centres etc. They are now preparing a condensed version for supply to 60,000 primary schools. It was noted that all these initiatives were taken by the NDG, which is also preparing selected excerpts of direct interest to teachers and the communities related to specific purposes. At this point, it was proposed that the Programme should support the pilot project in establishing groups to select appropriate materials and to finance its translation up to a certain limit, on an experimental basis. This type of co-operation should be extended to other NDGs which may be interested. The results of these pilot programmes could be evaluated by a future Consultation Meeting.

11. The participant from the Socialist Republic of Viet Nam pointed out that abstracts of APEID publications were made by Associated Centres. For large-scale dissemination, as Viet Nam would like to make, they would need financial support especially as they are short of paper. He pointed out that it is better to reduce the number of copies of publications and support the countries with translation of the materials into national languages in order to disseminate them to a wider group other than the NDG.

12. The participant from Iran informed the Group that "the NDG has been re-established and would be strengthened further. There was a need for the dissemination of 'correct information' which the NDG would then get to the practising teachers". In this regard the Department of In-service Teacher Training, Ministry of Education, with the help of university faculty members and college students could develop appropriate educational materials. Such a programme required a sound headquarters establishment which must be co-ordinated by a strong NDG.

13. The participant from China indicated that on his return, his institute would be establishing a system for the translation and distribution of APEID materials especially the Newsletter. Although there was the question of volume of the run because of the size of the country, he believed it was vital to get the message of APEID to the community.

14. The participant from China pointed out that 1984 would be the completion of a decade for APEID and suggested that APEID work of the past decade be assembled and that it should contain a summation of activities, excerpts from the reports of some of the activities and their published outcomes and with a detailed list of

activities. He suggested that these lists should be published. China would like to translate and distribute them widely in China. He suggested that other countries might like to similarly translate and disseminate.

15. On behalf of the ACEID Secretariat, this suggestion was welcomed, and that the book would be compiled and published. It would then be up to each National Development Group to decide to disseminate the material. It was further suggested that in addition to this publication there could be a special ACEID Newsletter to mark the occasion and statements from the NDGs should be included.

16. The Group was informed that the APEID Directory of National Centres for 1983 is almost completed and should be available by May. The NDGs were invited to examine the Directory carefully and identify from it those projects of particular interest to their countries. If necessary, these selected items should be translated for distribution to local researchers.

17. Reference was made to the brochures prepared by New Zealand (APEID and New Zealand) and by Thailand (APEID and Thailand). The Meeting was informed that China is preparing a document in both Chinese and English. Japan prepared the brochure on 'APEID and Japan' several years ago and is now revising it. Participants from Bangladesh, Iran, Indonesia, Pakistan, Papua New Guinea, and the Socialist Republic of Viet Nam indicated their intention to have similar brochures prepared in their respective countries. The Meeting recommended that all NDGs may consider preparing and publishing suitable brochures on APEID in relation to their countries.

The functions of NDG

18. The participant from Iran said that in spite of the general guidelines which had been distributed, (in 1973 and again in 1981) there was a need to have better understanding for the benefit of NDGs on some specific points; for instance, how to select the right people for membership of the NDG. He believed that this should be clearly indicated, and suggested possible sources for selection such as senior faculty members, education department officials, researchers, knowledgeable teachers and active members of the Associated Centres, not necessarily the heads of those centres. He believed that some formal regulations were essential to strengthen the functioning of APEID.

19. The participant from Papua New Guinea said he had no objections to the guidelines as already established. The problem in his country was that what was proposed was not always the function of NDG, e.g., the selection of participants was a function of the Department of Education; in other words, he saw that the policy of each government would modify the actions and responsibilities of the NDG. However, he believed that it was the task of the NDG to attempt to link the alternative authorities in accordance with the NDG guidelines.

20. The participant from Indonesia agreed with the view of his colleague from Papua New Guinea. The NDG, he said, required motivation to apply guidelines that are suggested, and he felt that a consultation meeting within each individual country to give that motivation would do much to help the NDG to become better established.

Such consultation should continue on an annual basis until the NDG became institutionalized. The participant from Bangladesh supported the suggestion from Indonesia and felt that although the general guidelines were there, aloofness reduces their impact.

21. The ACEID Secretariat suggested that the experience of the countries in which an effective mechanism of NDG is functioning might be useful to the countries in which NDGs have not found their feet. For example, Pakistan has developed an effective working NDG. This is a structured system with regular reporting. There were other exemplars such as the Five-Year Plan of the Republic of Korea and Japan, and the New Zealand information booklet, all of which give an effective framework for the work of the NDG.

22. It was explained that the NDG has an advisory and catalytic role to broaden the perspectives of the APEID institutions. Each NDG can take an active part in the selection to participate in APEID activities by the appropriate national authority as they know the possible scope of the activities and their application to their own countries. APEID has been promoting exchanges of resource persons and the services of consultants and this activity will be expanded.

23. The Regional Consultation Meeting in 1981 had discussed the question of 'quality control'. The participant from the Republic of Korea reported that they had built the 'quality control' component into the procedures for all innovative activities so that the activities themselves, the benefits and the procedures are evaluated and the findings sent back to APEID. He indicated that his country had set up a group and would be writing up the procedures for dissemination through ACEID.

24. The participant from the Socialist Republic of Viet Nam raised the question of relationship between NDGs and Unesco National Commissions. He felt that the NDG should maintain close co-operation with the National Commission for Unesco so that co-operation and harmony could develop. This was strongly endorsed by the Meeting. It was suggested that the guidelines should provide for (i) membership of the NDG to include a representative of the National Commission; and (ii) the proceedings of the NDG to be made available to the National Commission. The Meeting stressed that the specific relationship between the National Commission and NDG is essentially an internal matter but is based on the closest co-operation.

25. The Group reviewed the guidelines for National Development Groups first published in 1973 and 1981, and recommended amendments incorporating a new set of guidelines (appearing as Appendix A).

Development of communication support

26. The Meeting emphasized the need to have the full participation of the community and involvement of the teachers at all stages of an innovation.

27. The participant from Indonesia referred to the role of mass media which is ideally placed for promoting innovations and pilot projects. However, he said that in his country, this added to the cost of a project. The participant from Iran provided information on the educational services provided by national television as well as the

daily newspapers and a weekly magazine for parents. The participants from New Zealand said that the Associated Centres had recently prepared a media kit for dealing with various sections of the media. Copies of this could be made available to any Associated Centre in the region on request. The participant from Papua New Guinea referred to his country's experiences in the use of mass media in a situation in which the adult population was largely illiterate. He felt that the grassroots dissemination was a real difficulty but was very important. The participant from Bangladesh described the quite extensive coverage of radio and TV programmes in his country. He suggests that ACEID should focus more on how the various groups in the community can be reached in order to disseminate the results of the innovative practices developed by it.

28. The participant from Indonesia suggested that for teachers and administrators a kind of guidelines could be developed and printed for the dissemination of materials on innovations, but the parents and the villagers should use a different type of media. The participant from the Republic of Korea suggested that there was a strong need to give attention to the problem of communication in the promotion of educational innovations. The participant from Japan said that there are two kinds of approach to attract communication support: (1) direct approach; and (2) indirect approach. With regard to the latter, he commented that a successful strategy used in Japan was to invite community people to meet with APEID seminar participants to discuss, for example, 'Promoting mutual understanding among Asians'. This proved to be very effective in drawing attention of the press and the community both directly and indirectly. Reference was also made to the twofold Japanese procedure: The first was 'Ringi' which is the decision-making system by means of circulating the draft paper from down up, and the second was 'Nemawashi' which is an informal negotiation procedure for obtaining full support of the people in the various sections or agencies concerned. The participant from China gave an example of how a study of comparative cases can be influential. For example, a publication—One hundred years of Japanese education—was published in China and circulated widely and brought home the lesson regarding a due treasure of financial support to education. Case studies, etc., are influential channels of innovative ideas.

29. The Group recommended that APEID may give high priority to the question of communication support, and that ACEID may set up a study group to study this matter in depth. Members of the study group would be invited to bring with them exemplars of what they have done. It was also felt that support should be provided for country studies on specific topics.

30. In summary, the Group suggested the following four activities:

a) The development of programmes of interaction for use with the media;

b) The development of programmes for communication to and from the community at large particularly with their limitations through such factors as illiteracy;

c) The development of guidelines for the dissemination of materials to the community;

d) The development of programmes of training and exchange of experiences involving the policy-makers on innovative programmes.

The APEID programme for 1983 and 1984

31. The Group reviewed APEID activities scheduled for 1983 and the outline programme for 1984.

32. A number of participants raised the important issue of moral education which had been the subject of much discussion in the plenary session. They felt that there was need for this matter now to be taken up by ACEID as a major subject, building on the work earlier done at the National Institute of Educational Research (NIER), Japan.

33. The following programme was recommended by the Group:

a) Papers showing reflections on the problem of moral education should be prepared as soon as possible;

b) Papers of what is being done in moral education and the programmes underway in the countries should be prepared;

c) The NDGs should examine, along with ACEID, how these could be linked into the third cycle programme;

d) There should be a study group meeting to discuss the approaches to moral education early in 1984.

34. The participant from Pakistan offered to prepare a paper on reflections and forward to ACEID. In order to facilitate the above programme, NDGs will be asked to take steps to send initial position papers. This would enable the first review across the region to take place.

35. The participant from Indonesia suggested that Pamong School and small school programmes, special education (also for the gifted) could be incorporated into the universalization of education at the primary level. Similarly, distance learning, teacher training at the primary, technical and vocational education could be linked to the 1983 and 1984 programmes.

36. The Group discussed the new developments now emerging in computer education. It recommended that ACEID develops suitable co-operative activities on a priority basis in computer education, working in collaboration with the Japan Council of Educational Technology Centres and other similar groups in the region.

37. The problem of rural education was also discussed in Group C. The participant from Japan said that there had been numerous programmes and studies in rural education in many Member States, and that it was time for a study to note successes and failures. This synthesis study should be made as a priority. Professor Tajima offered to prepare a design of such study. The participant from Indonesia emphasized how the rural education could be linked to income-generating learning group activities in the schools and expressed a need for enhancing such activities.

38. Responding to a request, the participant from China offered to provide information and materials on the following:

a) Extension of primary education to minority groups;

b) Extension of work education in primary and secondary schools;

c) Some examples of communication support to communities at large.

39. The participants indicated their interest in the specific activities scheduled for 1983 and those proposed in the outline programme for 1984. These indications of interest are kept on record in ACEID Secretariat for reference and use in connection with the concerned activities.

Appendix A

GUIDELINES FOR NATIONAL DEVELOPMENT GROUPS

1. That the NDG may consider including in its composition one representative each, of the National Commission for Unesco and of the educational policy-makers in states/regions, apart from those of the Associated Centres, etc.;

2. That the NDG may hold frequent meetings, at least once every three months. Where this is not possible for some special reasons, the executive committee may meet at least once every three months, and the full NDGs may meet at least twice a year;

3. That the decisions of the NDG may be promptly supplied to all the Associated Centres, and ACEID Bangkok, to ensure early implementation on one side and timely information on the other;

4. That the NDG or clearing house, as the case may be, may undertake the publication of a periodical newsletter which, apart from ACEID, may be supplied to the entire fraternity of Associated Centres;

5. That the NDG may consider making use of the media such as radio and TV in further dissemination of APEID;

6. That the NDG may select specific material from APEID publications, and regularly circulate both in English as well as the national language if need be, to the concerned Associated Centres and institutions for wider dissemination.

7. That the NDG may consider the preparation of a futuristic long-term programme in collaboration with the Associated Centres, etc., so that this could constitute the basic material for the preparation of a long-term APEID programme;

8. That the NDG may regularly undertake an assessment of the innovative needs of the country together with an evaluation of innovative work already undertaken. These reports may be widely disseminated;

9. That the NDG may carefully scrutinize all nominations for the programmes conducted through ACEID with a view to ensuring that the candidates meet the requirements of the activity and maintain the highest level of participation;

10. That the NDG may endeavour to ensure expeditious supply of all the locally published reports and returns requested by ACEID; and

11. That the NDG may examine the feasibility of holding a regular annual convention to examine its performance.

Annex I

AGENDA

1. Inaugural session

2. Election of Officers of the Meeting

3. Consideration of the Provisional Schedule of Work

4. Review:
   a) APEID activities 1981-1982, with background of APEID's second cycle
   b) Countries' major educational policy trends and developments, presented by the participants

5. Review of APEID's third cycle programme

6. In-depth discussion on:
   a) Universalization of education at the primary level
   b) Promotion of scientific and technological competence and creativity, with focus on science for all
   c) Other concerns as identified by the Meeting

7. Consideration and adoption of the report

8. Closing of the Meeting

Annex II

ADDRESSES

Welcome Address by Mr. Raja Roy Singh, Assistant Director-General Unesco Regional Office for Education in Asia and the Pacific

Your Excellency, Dr. Kasem Sirisumpundh, Minister of Education,
Excellencies,
Distinguished Participants,
Ladies and Gentlemen,

On behalf of Unesco and on my personal behalf, I have great pleasure in extending to you a warm welcome to the Eighth Regional Consultation Meeting on the Asian Programme of Educational Innovation for Development (APEID). I would like to express our gratitude to Your Excellency for your presence with us this morning to inaugurate the Meeting, despite the heavy claims on your time by duties of state. Your Excellency's deep interest in the work of Unesco and of its Regional Office here has always been a source of great encouragement to us. I should like to take this opportunity to thank you and the Ministry of Education and the Thailand National Commission for Unesco for their support and co-operation. May I also express our profound gratitude to all the governments of the region of Asia and the Pacific participating in APEID for the constant and unvarying support they have given to the Programme and which has sustained it from strength to strength. An eloquent testimony to their interest is this distinguished gathering of senior administrators, scholars and educators from the countries, responding to our invitation for this Meeting.

I should like to take this opportunity to thank in a special way my friend and colleague, Mr. Winston Prattley, Regional Representative of UNDP. UNDP has since the beginning of APEID done more than be one of the funding resource: it has stimulated the initiatives of the programme and notably fostered its innovative impetuses.

Many of you have attended most or some of the earlier Regional Consultation Meetings. Some are attending this consultation for the first time. Each Consultation Meeting has attempted a few critical tasks to solve the new problems and to seize the new opportunities to strengthen the programme at a particular point in time. Each Consultation Meeting and style of APEID's working became an integral part of a total pattern.

The first Regional Consultation Meeting was held in Bangkok in early 1974 and defined the main directions for APEID's evolution, namely innovations in six main programme areas. In 1975, the Second Regional Consultation Meeting on APEID was held in Tokyo. It reviewed the progress of APEID activities implemented earlier, and

those scheduled for 1975–1976, and set the pattern for future consultations. It identified the National Development Groups as the kingpins of APEID. By assigning this important role to the National Development Groups, the Meeting brought about a major conceptual change. Rather than individual Associated Centres exchanging experiences or benefiting from co-operative actions, a national body was to actively perform the role of co-ordination of the Associated Centres and to be a liaison with other countries and with ACEID. This Meeting also for the first time focused on specific development concerns, namely, rural development, health and nutrition, and skills development.

In 1976, the Third Regional Consultation Meeting was held in Bangkok and carried out the task of defining the scope and design of the second cycle of APEID (1978–1982) with a view to ensuring in particular that the Associated Centres and National Development Groups played a central role in designing the total programme and its activities.

In 1977, the Fourth Regional Consultation Meeting carried out an extensive and intensive evaluation of APEID based on studies made at the national level and sub-regional level.

With a wealth of materials on evaluation, study and researches and future country plans, the Meeting established a work plan for the second cycle (1978–1981), demonstrating the linkage between evaluation and participatory planning.

The Fifth Regional Consultation Meeting was held in 1978 and brought together the heads of all the Associated Centres and the heads of National Development Groups. One of the most significant outcomes of this Meeting was the designing in detail of joint innovative projects.

In 1979, the Sixth Regional Consultation Meeting was held in Bangalore and launched an expanded attachment/internship programme for the least developed countries, and undertook three joint innovative projects. The Meeting also considered how the recommendations of the Fourth Regional Conference of Ministers of Education and Those Responsible for Economic Planning in Asia and Oceania (MINEDASO IV) (Colombo, 1978) as far as they were relevant to the scope of APEID, were to be reflected in the future activities of APEID.

The Seventh Regional Consultation Meeting on APEID was held in June 1981 and designed the third cycle of APEID, under certain development themes. This Meeting also stressed that educational innovations should not concentrate only on the effective use of capacities as they *exist* to contribute to development goals, but pay equal attention also to develop the infrastructure of the education system to enhance their capacities. For this purpose, three areas were suggested: first, educational technologies; second, professional support services to innovation and training of personnel; and the last, reflections, researches and information.

As you would have noted from the agenda of your Meeting, you are meeting at an important moment. Many of the countries in the region have been engaged in developing their new socio-economic plans; in many countries education has been accorded high development priority; there are unmistakable signs of a renewal of the resolve to make education accessible to all of the nation's children. Unesco has just

finalized its Second Medium-Term Plan to which your countries have contributed richly by way of analysis of their experiences and future needs, and by making suggestions on new orientations and forms of co-operation.

The cumulative experience of the consultation process over the last many years and the impetus of the unfolding development challenges which the countries of the region face provide the foundations of the present consultation. This I am sure will be abundantly productive.

Once again, on behalf of Unesco and on behalf of its Regional Office and the Asian Programme of Educational Innovation for Development, I extend to you all a most cordial welcome.

At this moment may I request Your Excellency to address the Meeting and inaugurate it.

Inaugural Address by H.E. Dr. Kasem Sirisumpundh
Minister of Education, Thailand

Mr. Assistant Director-General of Unesco,
Distinguished Participants and Observers,
Ladies and Gentlemen,

It is a great pleasure and honour for me to be with you here this morning at the inaugural session of the Eighth Regional Consultation Meeting on APEID. May I, on behalf of the Royal Thai Government, and on my own behalf, extend a warm welcome to all the participants and observers to this important APEID meeting. The significance of the tasks ahead of you during this week can never be overemphasized, for it is in the light of your review and evaluation of the various programme areas, based on actual merit and benefits derived, that APEID activities could be suitably adjusted, new priorities set and the future direction of the programme accordingly determined. With the wisdom of so many eminent educators from the participating member countries, and with the extensive experience of the Chairmen of the National Development Groups and Heads of selected Associated Centres, I am confident that this meeting will be successfully concluded with useful recommendations and guidelines for future action.

As an educationist and one closely involved in the formulation of educational policy of Thailand, I have personally followed with keen interest the progress of APEID for which Thailand has the privilege of providing host facilities, a modest contribution towards its operation as well as actively participating in its various programmes and activities. It is indeed gratifying to see APEID being at oftentimes cited as a fine model of technical co-operation among developing countries. Its success can be attested by the rapid expansion of the programme and the network and the increasing number of Associated Centres. With such rapid growth, it is perhaps advisable for us to take this opportunity to jointly consider the effectiveness and the impact of the programme participation at the national and regional levels. The institutional mechanism of ACEID has been functioning well in the past, and it will be the responsibility of all concerned to see to it that this administrative unit will continue to co-ordinate the regional programmes usefully so that maximum benefits could be obtained from programme implementation.

I am also happy to note that this meeting will have an opportunity of having in-depth discussion on two very important programme areas of APEID's third cycle, namely, universalization of education at the primary level and promotion of scientific and technological competence and creativity, with focus on science for all, for both areas of concern have been accorded high priority in Thailand's Fifth Economic and Social Development Plan currently in force. After more than half a century of compulsory education, and after so much efforts and resources devoted to the enforcement of the Compulsory Education Act of 1921, Thailand is still suffering from illiteracy affecting as high as 14 per cent of our people. Furthermore, I am sure that, like

Thailand, many developing countries have experienced the problem of neo-literates rapidly relapsing into illiteracy once again, unless proper measures and suitable reading materials are available. Your suggestions and recommendations on this matter will therefore be of great use to many member countries.

Thailand particularly welcomes APEID's emphasis on the promotion of science and technological competence and creativity. We feel that this programme will have a very significant bearing on most member countries including Thailand. With the discovery of some oil in the north as well as natural gas in the Gulf of Siam, and with the implementation of the Eastern Seaboard Development Project, it is envisaged that Thailand will join the ranks of other newly industrialized countries in the second half of this decade. The urgency for the promotion of scientific and technological competence and creativity is therefore all the more keenly felt. I am happy to note that our Institute for the Promotion of Teaching Science and Technology, established more than a decade ago, has been playing a major role in popularizing these two very important disciplines for both in-school and out-of-school children, and has also begun to give a regional spin-off.

I wish to take this opportunity to commend the usefulness of ACEID's system of information dissemination which has kept the member countries abreast on all programmes and activities extensively carried out under the APEID's aegis. It will be up to each member country to make full use of these materials and publications. In Thailand, for example, our National Commission has just set up a small clearing house unit within its Library and International Documentation Centre, and efforts have been made to prepare abstracts of these materials in the Thai language for dissemination to interested institutions and scholars at the national level.

Distinguished participants, Ladies and Gentlemen, as time is now auspicious, may I declare open the Eighth Regional Consultation Meeting on APEID and wish you all every success in your deliberations.

Thank you.

Statement of Mr. Winston R. Prattley
UNDP Regional Representative

Your Excellency Dr. Kasem Sirisumpundh, Minister of Education,
Mr. Raja Roy Singh, Assistant Director-General, Unesco Regional Office,
Distinguished Participants, Ladies and Gentlemen,

I feel honoured and privileged to have had this second opportunity to address the Inaugural Session of the APEID's Regional Consultation Meeting. At a similar occasion two years ago I had the opportunity to convey to this meeting our concerns on the important matter of accountability to the donors who support UNDP efforts in technical co-operation. At that time this Consultation was addressing itself *inter alia* to developing the project and the Work Plan for the third programming cycle of the APEID for the years 1982–1986, a period coinciding with UNDP's programme cycle. In my statement on the last occasion I had exhorted the distinguished participants to develop a project that would meet the region's own priorities and objectives. I should expect you would now wish to assess the performance of the programmes, and re-shape it as necessary for deriving maximum value and impact in the light of current realities.

I note that the primary objectives of this Consultation during the next seven days will be to critically assess the APEID activities implemented during 1981–1982 as well as to scrutinize the proposals in hand for the remaining years of the current programme cycle. I believe you would be aware that there has been excellent co-operation between Unesco and UNDP in assembling the UNDP-financed Project RAS/82/015 titled 'Regional Technical Co-operation in Educational Innovation within the Asian Programme of Educational Innovation for Development' which is currently under implementation. However, it has been agreed that the project would be revised in the light of the results of the present Consultation and the recommendations arising from an UNDP/Unesco joint evaluation of the project which is to be undertaken in April–May 1983. I therefore find today's occasion to be a most propitious one, to share with you some pertinent issues with regard to APEID at this stage.

First is the matter of the duration of UNDP financial support for this project. As you may be aware, UNDP's involvement in APEID began in 1975 when the first phase of the project was launched. Today, eight years later, we are in the third phase of APEID. UNDP had originally notionally earmarked $2 million for the years 1982–1986, but this figure has had to be reduced to $1.84 million on account of resource constraints. While the manifold objectives of the present project are well understood, the fact of the long duration of the project has necessitated a close review of the nature of its inputs and the impact of its outputs. The first Meeting of government aid coordinators of the Asia and Pacific region, held in 1981, recognized this fact and decided that UNDP would report to a subsequent meeting of the aid coordinators,

now due in October 1983, on results of the evaluations of a number of projects, particularly those being supported for close to ten years. Given the large commitment of UNDP for this project, and the fact that philosophically as well as practically UNDP cannot hope to continue to finance the project at the level of the present contribution for indefinite periods, your attention should perhaps be given to making it self-reliant.

Second is the related matter of the resources available to the UNDP for technical co-operation. We have had occasion to brief Governments to the effect that these resources have been seriously eroded in real terms, perhaps as a result of the world recession and a tendency to shift away from multi-lateralism; so much so that indicative figures of resources established even a year ago are no longer applicable. Under such circumstances, ways and means have to be sought for more effective and efficient utilization of the available level of resources for the forthcoming years.

It is clear to us that some of the ways of sustaining the project continue to be by following a networking approach, working with and through common programmes of national institutions, use of short-term consultants of TCDC type or otherwise, and also by supplementing resources through specific segments supported by country-level projects. You may wish to enter into specific understandings in these matters.

Third, as you are well aware, certain programme areas are identified as the foci for UNDP/APEID support, namely; universalization of education through formal and non-formal means, promotion of scientific and technological competence and creativity, education and work, educational technology through stress on mass media and low-cost instructional materials, and professional support services and training. The present Consultation may wish to review whether these programme areas continue to remain valid or need any deletions or substitutions, by what kind of modalities and in association with which institutions specific activities may be implemented, the appropriate emphasis to be placed on various components and activities under the programme, and so on. I would only stress that the regional programme should be optimally designed for maximum impact, on the basis of agreed means and tests of impact, and that it should have provision for a self-correcting mechanism through regular reporting and tripartite reviews, etc.

We look forward to seeing the results of your deliberations, as you re-fashion this project.

Thank you.

Annex III

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(18-21 March and 29-30 March)

1. Mr. William L. Streat	(Australia)
2. Dr. T. N. Dhar	(India)
3. Dr. Dolores F. Hernandez	(Philippines)
4. Dr. Saiyut Champatong	(Thailand)
5. Dr. Kowit Pravalpruk	(Thailand)

Annex V

LIST OF GROUP MEMBERS

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	Dr. Liceria B. Soriano	(SEAMEO-INNOTECH)
	Dr. B. S. Sehgal	(WHO)
	Mr. Raja Roy Singh	(Unesco/ROEAP)
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